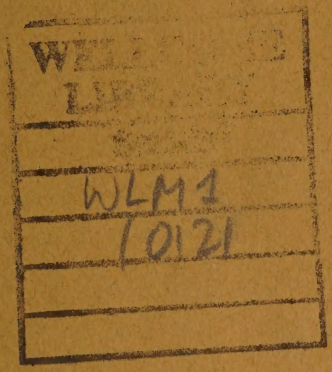

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OF

MENTAL SCIENCE.

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VOL. XLV.

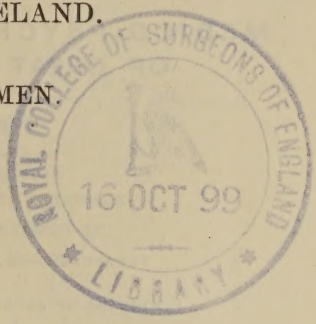
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MDCCCXCIX.

"In adopting our title of the *Journal of Mental Science, published by authority of the Medico-Psychological Association,* we profess that we cultivate in our pages mental science of a particular kind, namely, such mental science as appertains to medical men who are engaged in the treatment of the insane. But it has been objected that the term mental science is inapplicable, and that the term mental physiology, or mental pathology, or psychology, or psychiatry (a term much affected by our German brethren), would have been more correct and appropriate; and that, moreover, we do not deal in mental science, which is properly the sphere of the aspiring metaphysical intellect. If mental science is strictly synonymous with metaphysics, these objections are certainly valid; for although we do not eschew metaphysical discussion, the aim of this JOURNAL is certainly bent upon more attainable objects than the pursuit of those recondite inquiries which have occupied the most ambitious intellects from the time of Plato to the present, with so much labour and so little result. But while we admit that metaphysics may be called one department of mental science, we maintain that mental physiology and mental pathology are also mental science under a different aspect. While metaphysics may be called speculative mental science, mental physiology and pathology, with their vast range of inquiry into insanity, education, crime, and all things which tend to preserve mental health, or to produce mental disease, are not less questions of mental science in its practical, that is in its sociological point of view. If it were not unjust to high mathematics to compare it in any way with abstruse metaphysics, it would illustrate our meaning to say that our practical mental science would fairly bear the same relation to the mental science of the metaphysicians as applied mathematics bears to the pure science. In both instances the aim of the pure science is the attainment of abstract truth; its utility, however, frequently going no further than to serve as a gymnasium for the intellect. In both instances the mixed science aims at, and, to a certain extent, attains immediate practical results of the greatest utility to the welfare of mankind; we therefore maintain that our JOURNAL is not inaptly called the *Journal of Mental Science*, although the science may only attempt to deal with sociological and medical inquiries, relating either to the preservation of the health of the mind or to the amelioration or cure of its diseases; and although not soaring to the height of abstruse metaphysics, we only aim at such metaphysical knowledge as may be available to our purposes, as the mechanician uses the formularies of mathematics. This is our view of the kind of mental science which physicians engaged in the grave responsibility of caring for the mental health of their fellow-men may, in all modesty, pretend to cultivate; and while we cannot doubt that all additions to our certain knowledge in the speculative department of the science will be great gain, the necessities of duty and of danger must ever compel us to pursue that knowledge which is to be obtained in the practical departments of science with the earnestness of real workmen. The captain of a ship would be none the worse for being well acquainted with the higher branches of astronomical science, but it is the practical part of that science as it is applicable to navigation which he is compelled to study."—*Sir J. C. Bucknill, M.D., F.R.S.*

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1897. Campbell, Robert Brown, M.B., C.M.Edin., Assistant Medical Officer, Royal Asylum, Montrose, N.B.

1897. Cappe, Herbert Nelson, M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer, Surrey County Asylum, Brookwood.

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1862. Clouston, T. S., M.D.Edin., F.R.C.P.Edin., F.R.S.E., Physician Superintendent, Royal Asylum, Morningside, Edinburgh. (*Editor of Journal*, 1873—1881.) (PRESIDENT, 1888.)

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1896. Maclaren, J., M.B., C.M.Edin., Assistant Medical Officer, Spring Villa, Oughtybridge, Sheffield.

1886. Maclean, Allan, L.R.C.S.Edin., 10, Mitre Court Chambers, Temple, E.C.

1873. Macleod, M. D., M.B., Medical Superintendent, East Riding Asylum, Beverley, Yorks.

1899. MacLulich, Peers, M.B., B.C., B.A.Dub., Joint Counties Asylum, Carmarthen, S. Wales.

1898. Macnaughton, George W. F., M.D., Warwick Lodge, 436, Fulham Road, London, S.W.

1882. Macphail, Dr. S. Rutherford, Derby Borough Asylum, Rowditch, Derby.

1896. Macpherson, Dr. Charles, Deputy Commissioner in Lunacy, 51, Queen Street, Edinburgh.

1886. Macpherson, John, M.B., M.P.C., Medical Superintendent, Stirling Asylum, Larbert.

1895. Madge, Arthur E., M.R.C.S.Eng., L.R.C.P.Lond., Priestwood, Bracknell, Berks.

1896. Maguire, Charles Evan, M.B., C.M., Assistant Colonial Surgeon, Lagos, West Africa.

1896. Mallanah, S., M.B.Edin., Medical School, Hyderabad, Deccan, India.

1865. Manning, Harry, B.A.Lond., M.R.C.S., Laverstock House, Salisbury.

1896. Marr, Hamilton C., M.D.Glasg. Univ., Senior Assistant Physician, Woodilee Asylum, Lenzie.

1897. Marshall, John, M.B., C.M.Glasg., Assistant Medical Officer, County Asylum, Bridgend, Glamorgan.

1896. Martin, James Clarke, L.R.C.S.I., L.M., L.R.C.P., Assistant Medical Officer, District Asylum, Letterkenny.

1897. Mathieson, M.B., C.M.Glasg., Senior Assistant Medical Officer, County Asylum, Stafford.

1888. McAlister, William, M.B., C.M., Struan Villas, Kilmarnock.

1894. McClaughry, Thomas, L.R.C.S.I. and L.A.H. Dubl., Assistant Medical Officer, District Asylum, Maryborough, Ireland.

1886. McCreery, James Vernon, L.R.C.S.I., Medical Superintendent, New Lunatic Asylum, Melbourne, Australia.

1876. McDowall, John Greig, M.B.Edin., Medical Superintendent, West Riding Asylum, Menston, near Leeds.

1870. McDowall, T. W., M.D.Edin., L.R.C.S.E., Medical Superintendent, Northumberland County Asylum, Morpeth. (PRESIDENT, 1897.)

1882. McNaughton, John, M.D., Medical Superintendent, Criminal Lunatic Asylum, Perth.

1894. McWilliam, Alexander, M.B., C.M.Aberd., Medical Superintendent, Heigham Hall, Norwich.

1890. Menzies, W. F., M.D., B.Sc.Edin., Medical Superintendent, Stafford County Asylum, Cheddleton, near Leek.

1891. Mercier, Charles A., M.B.Lond., F.R.C.S.Eng., Lecturer on Insanity, Westminster Hospital; Flower House, Catford, S.E.
1877. Merson, John, M.D.Aberd., Medical Superintendent, Borough Asylum, Hull.
1871. Mickle, William Julius, M.D., F.R.C.P.Lond., Medical Superintendent, Grove Hall Asylum, Bow, London. (PRESIDENT, 1896.)
1867. Mickley, George, M.A., M.B.Cantab., Freshwell House, Saffron Walden, Essex.
1893. Middlemass, James, M.B., C.M., B.Sc.Edin., Borough Asylum, Ryhope, Sunderland.
1898. Middlemist, George Edwyn, M.B., Moretonhampstead, Devon.
1883. Miles, George E., M.R.C.P., &c., Medical Superintendent, Hospital for the Insane (Idiots), Newcastle, N.S.W.
1897. Millard, Reginald J., M.B., Ch.M., Sydney, Assistant Medical Officer, Callan Park, Sydney, N.S.W.
1887. Miller, Alfred, M.B. and B.C.Dubl., Medical Superintendent, Hatton Asylum, Warwick.
1893. Mills, John, M.B., B.Ch., and Diploma in Mental Diseases, Royal University of Ireland, Assistant Medical Officer, District Asylum, Ballinasloe.
1881. Mitchell, R. B., M.D., Medical Supt., Midlothian District Asylum.
1885. Molony, John, F.R.C.P.I., Med. Supt., St. Patrick's Hospital, Dublin.
1897. Montgomery, Sydney Hamilton Rowan, M.B., B.Ch., B.A.O., Royal University, Ireland, Assistant Medical Officer, Borough Asylum, Nottingham.
1878. Moody, James M., M.R.C.S.Eng., L.R.C.P. and L.M.Edin., Medical Superintendent, County Asylum, Cane Hill, Surrey.
1885. Moore, E. E., M.B.Dubl., M.P.C., Medical Superintendent, District Asylum, Letterkenny, Ireland.
1891. Moore, George, J.P., M.D., M.R.C.S., Queen's Farm, St. Saviour's, Jersey.
1899. Moore, Wm. D., M.D., M.Ch., Medical Superintendent, Holloway Sanatorium, Virginia Water, Surrey.
1897. Mornement, Robert Harry, M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer, London County Asylum, Cane Hill, Purley, Surrey.
1892. Morrison, Cuthbert S., L.R.C.P. and L.R.C.S.Edin., Medical Superintendent, County and City Asylum, Burghill, Hereford.
1896. Morton, W. B., M.B., Assistant Medical Officer, Brislington House, Bristol.
1896. Mott, F. W., M.D., B.S., F.R.C.P.Lond., F.R.S., 25, Nottingham Place, W.; Pathologist, London County Asylum; Assistant Physician, Charing Cross Hospital.
1896. Mould, G. E., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Northumberland House, Finsbury Park, London, N.
1862. Mould, George W., M.R.C.S.Eng., Medical Superintendent, Royal Lunatic Hospital, Cheadle, Manchester. (PRESIDENT, 1880.)
1897. Mould, Philip G., M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer, Royal Lunatic Hospital, Cheadle, Manchester.
1878. Muirhead, Claud, M.D., F.R.C.P.Edin., 30, Charlotte Sq., Edinburgh.
1897. Mumby, Bonner Harris, M.D.Aberd., D.P.H.Cantab, Medical Superintendent, Borough Asylum, Portsmouth.
1893. Murdoch, James William Aitken, M.B., C.M.Glasg., Medical Superintendent, Berks County Asylum, Wallingford.
1878. Murray, Henry G., L.R.C.P.Irel., L.M., L.R.C.S.I., Assistant Medical Officer, Prestwich Asylum, Manchester.
1891. Musgrove, C. D., M.D.Edin., 8, Herbert Terrace, Penarth, S. Wales.

1880. Neil, James, M.D., M.P.C., Assistant Medical Officer, Warneford Asylum, Oxford.
1875. Newington, Alexander, M.B.Camb., M.R.C.S.Eng., Woodlands, Ticehurst.

1873. Newington, H. Hayes, F.R.C.P.Edin., M.R.C.S.Eng., Ticehurst, Sussex. (PRESIDENT, 1889.) (*Treasurer.*)
1893. Newington, John, L.S.A., Tattlebury House, Goudhurst, Kent.
1881. Newth, A. H., M.D., Haywards Heath, Sussex.
1869. Nicolson, David, M.D. and C.M.Aberd., Royal Courts of Justice, Strand, W.C. (left Guildford); Lord Chancellor's Visitor. (PRESIDENT, 1895.)
1895. Nicolson, Robert Henderson, M.B., C.M.Aberd., 2, Tavistock Crescent, Westbourne Park, London, W.
1893. Nobbs, Athelstane, M.B., C.M.Edin., 339, Queen's Road, Battersea Park, S.W.
1888. Nolan, Michael J., L.R.C.P.I., M.P.C., Medical Superintendent, District Asylum, Downpatrick.
1892. Noott, Reginald Harry, M.B., C.M.Edin., Senior Assistant Medical Officer, Broadmoor Criminal Lunatic Asylum, Crowthorne, Wokingham.
1880. Norman, Conolly, F.R.C.P.I., Medical Superintendent, Richmond District Asylum, Dublin, Ireland. (*Hon. Secretary for Ireland,* 1887-1894.) (PRESIDENT, 1895.) (*Editor of Journal.*)

1885. Oakshott, J. A., M.D., Medical Superintendent, District Asylum, Waterford, Ireland.
1892. O'Mara, Dr., District Asylum, Limerick, Ireland.
1881. O'Meara, T. P., M.B., Medical Superintendent, District Asylum, Carlow, Ireland.
1886. O'Neill, E. D., L.R.C.P.I., Medical Superintendent, The Asylum, Limerick.
1897. Orange, Margaret, L.S.A.Lond., M.B.Brux., Assistant Medical Officer, London County Asylum, Claybury, Essex.
1868. Orange, William, M.D.Heidelb., F.R.C.P.Lond., C.B., The Bryn, Godalming, Surrey. (PRESIDENT, 1883.)
1890. Oswald, Landel R., M.B., M.P.C., Medical Superintendent, City of Glasgow District Asylum, Gartcosh, N.B.
1899. Owen, Corbet W., M.B., C.M.Edin., Counties Asylum, Denbigh, North Wales.

1898. Parker, William Arnot, M.B., C.M., Gartlock Asylum, Gartcosh, N.B.
1899. Parsons, L. D., B.A., M.B., Ch.B., County Asylum, Bodmin, Cornwall.
1898. Pasmore, Edwin Stephen, M.D.Lond., M.R.C.P.Lond., London County Asylum, Banstead, Sutton, Surrey.
1893. Paterson, Charles Edward, M.D.Edin., Arnold House, Farnborough, Hants.
1899. Paton, Robert N., L.R.C.P., L.R.C.S.Edin., Medical Officer, H.M. Prison, Wormwood Scrubs, London, W.
1892. Patterson, Arthur Edward, M.B., C.M.Aberd., Senior Assistant Medical Officer, City of London Asylum, Dartford.
1889. Peacock, H. G., L.R.C.P.Edin., M.R.C.S. and L.S.A.Lond., The Lawn, Great Malvern; and Ashwood House Private Asylum, Kingswinford, Staffs.
1873. Pedler, George H., L.R.C.P.Lond., M.R.C.S.Eng., 6, Trevor Terrace, Knightsbridge, S.W.
1893. Perceval, Frank, M.R.C.S.Eng., L.R.C.P.Lond., Medical Superintendent, County Asylum, Whittingham, Preston, Lancashire.
1874. Petit, Joseph, L.R.C.S.I., Medical Superintendent, District Asylum, Sligo.
1878. Philipps, Sutherland Rees, M.D., C.M. Queen's Univ. Irel., F.R.G.S., St. Ann's Heath, Virginia Water, Surrey.
1875. Philipson, George Hare, M.D. and M.A.Cantab., F.R.C.P.Lond., 7, Eldon Square, Newcastle-on-Tyne.
1891. Pierce, Bedford, M.D.Lond., M.R.C.P., Medical Superintendent, The Retreat, York.
1888. Pietersen, J. F. G., M.R.C.S., Ashwood House, Kingswinford, near Dudley, Stafford.

1871. Pim, F., Esq., M.R.C.S.Eng., L.R.C.P.Irel., Medical Superintendent, Palmerston, Chapelizod, co. Dublin, Ireland.

1898. Piper, Francis Parris, M.B.Lond., M.R.C.S., L.R.C.P., London County Asylum, Bexley, Kent.

1890. Pitcairn, J. J., L.R.C.P., M.R.C.S., M.P.C., 1, Parkhurst Road, Holloway, N.

1896. Planck, Charles, M.R.C.S.Eng., L.R.C.P.Lond., M.A.Camb., Assistant Medical Officer, East Sussex County Asylum, Haywards Heath.

1877. Plaxton, Joseph William, M.R.C.S., L.S.A.Eng., Lunatic Asylum, Kingston, Jamaica.

1889. Pope, George Stevens, L.R.C.P. and L.R.C.S.Edin., L.F.P. and S.Glasg., Medical Superintendent, Middlesbrough Asylum, Cleveland, Yorks.

1876. Powell, Evan, M.R.C.S.Eng., L.S.A., Medical Superintendent, Borough Lunatic Asylum, Nottingham.

1891. Price, Arthur, M.R.C.S., L.S.A., M.P.C., Merriebank, Moss Lane, Aintree, Liverpool.

1875. Pringle, H. T., M.D.Glasg., Medical Superintendent, County Asylum, Bridgend, Glamorgan.

1899. Pulford, Herbert, M.A., M.B., B.C.Cantab., Assistant Medical Officer, St. Luke's Hospital, London, E.C.

1899. Rainsford, F. E., B.A., M.B., T.C.D., Resident Physician, Stewart Institute, Palmerston, co. Dublin.

1894. Rambaut, Daniel F., M.D.Univ. Dubl., Third Assistant Medical Officer and Pathologist, Richmond District Asylum, Dublin.

1889. Raw, Nathan, M.D., M.P.C., Mill Road Infirmary, Liverpool.

1893. Rawes, William, M.B.Durh., F.R.C.S.Eng., Medical Superintendent, St. Luke's Hospital, Old Street, London, E.C.

1896. Ray, Matthew B., M.B., C.M.Edin., Admarsh, Park Avenue, Harrogate.

1870. Rayner, Henry, M.D.Aberd., M.R.C.P.Edin., 16, Queen Anne Street, London, W., and Upper Terrace House, Hampstead, London, N.W. (PRESIDENT, 1884.) (*Late General Secretary.*) (*Editor of Journal.*)

1899. Redington, John, L.R.C.P., L.R.C.S.I., A.M.O., Richmond Asylum, Dublin.

1887. Reid, William, M.D., Physician Superintendent, Royal Asylum, Aberdeen.

1897. Renton, James Murray, M.A., M.B.Edin., Senior Assistant Medical Officer, County Asylum, Chester.

1891. Renton, Robert, M.B., C.M.Edin., M.P.C., Montague Lawn, London Road, Cheltenham.

1886. Revington, George, M.D. and Stewart Scholar Univ. Dubl., M.P.C., Medical Superintendent, Central Criminal Asylum, Dundrum, Ireland.

1897. Richard, William J., M.A., M.B., C.M.Glasg., Medical Officer, Govan Parochial Asylum, Merryflats, Govan.

1899. Richards, John, M.B., C.M.Edin., Borough Asylum, Bowditch, Derby.

1889. Richards, Joseph Peeke, M.R.C.S., L.S.A., 6, Freeland Road, Ealing, W.

1899. Richardson, A. Y., M.B., B.S., County Asylum, Melton, Suffolk.

1893. Rivers, William H. Rivers, M.D.Lond., Cambridge University.

1871. Robertson, Alexander, M.D.Edin., 11, Woodside Crescent, Glasgow.

1887. Robertson, G. M., M.B., C.M., M.P.C., Medical Superintendent, Perth District Asylum, Murthly.

1895. Robertson, William Ford, M.B., C.M., Scottish Asylums' Laboratory, 12, Bristo Place, Edinburgh.

1895. Robinson, George Burton, M.B., L.R.C.P., M.R.C.S., resigns as from December, 1899.

1899. Rochfort-Brown, Herbert, M.A.Oxon., M.B., F.R.C.S.Eng., Medical Officer, Natal Government Asylum, Pietermaritzburg, Natal, South Africa.

1876. Rogers, Edward Coulton, M.R.C.S.Eng., L.S.A., County Asylum, Fulbourn, Cambridge.

1859. Rogers, Thomas Lawes, M.D.St. And., M.R.C.P.Lond., M.R.C.S.Eng., Eastbank, Court Road, Eltham, Kent. (PRESIDENT, 1874.)

1895. Rolleston, Lancelot W., M.B., B.S.Durh., Senior Assistant Medical Officer, Middlesex County Asylum, Tooting, S.W.

1879. Ronaldson, J. B., L.R.C.P.Edin., Medical Officer, District Asylum, Haddington.

1879. Roots, William H., M.R.C.S., Canbury House, Kingston-on-Thames.

1899. Rorie, George Arthur, M.B., C.M., Westgreen House, Dundee, N.B.

1860. Rorie, James, M.D.Edin., L.R.C.S.Edin., Medical Superintendent, Royal Asylum, Dundee. (*Late Hon. Secretary for Scotland.*)

1888. Ross, Chisholm, M.B.Edin., M.D.Sydney, Hospital for the Insane, Kenmore, New South Wales.

1899. Rotherham, Arthur, M.B., B.C.Cantab., Horton Manor Asylum, near Epsom, Surrey.

1884. Rowe, E. L., L.R.C.P.Edin., Medical Superintendent, Borough Asylum, Ipswich.

1883. Rowland, E. D., M.D., C.M.Edin., The Public Hospital, New Amsterdam, British Guiana.

1877. Russell, A. P., M.B.Edin., The Lawn, Lincoln.

1883. Russell, F. J. R., L.R.C.P.Irel.

1866. Rutherford, James, M.D.Edin., F.R.C.P.Edin., F.F.P.S.Glasgow, Physician Superintendent, Crichton Royal Institution, Dumfries. (*Hon. Secretary for Scotland,* 1876–86.)

1896. Rutherford, James M., M.B., C.M.Edin., Assistant Physician, Royal Edinburgh Asylum, Morningside.

1896. Rutherford, Robert Leonard, M.D., Medical Superintendent, Digby's Asylum, Exeter.

1887. Rutherford, W., M.D., Consulting Physician, Ballinasloe District Asylum, Ireland.

1892. Ruttledge, Victor, M.B., District Asylum, Londonderry, Ireland.

1889. Ruxton, William Leddington, M.D. and C.M., 33, West Parade, Newcastle-on-Tyne. (Retires end of 1899.)

1894. Sankey, Edward H. O., M.A., M.B., B.C.Cantab., Resident Medical Licensee, Boreatton Park Licensed House, Baschurch, Salop.

* Sankey, R. Heurtley H., M.R.C.S.Eng., Medical Superintendent, Oxford County Asylum, Littlemore, Oxford.

1891. Saunders, Charles Edwards, M.D.Aberd., M.R.C.P.Lond., Medical Superintendent, Haywards Heath Asylum, Sussex.

1873. Savage, G. H., M.D.Lond., 3, Henrietta Street, Cavendish Square, W. (*Late Editor of Journal.*) (PRESIDENT, 1886.)

1894. Scanlan, William T. A., M.B., M.Ch., B.A.O.R.U.I., Assistant Medical Officer, District Asylum, Cork.

* 1862. Schofield, Frank, M.D.St. And., M.R.C.S., Medical Superintendent, Camberwell House, Camberwell.

1899. Scott, Charles R., M.B., C.M.Edin., Warneford Asylum, Oxford.

1896. Scott, James, M.B., C.M.Edin., Medical Officer, H.M. Prisons, Holloway and Newgate; 3, Parkhurst Road, Holloway, London, N.

1889. Scowcroft, Walter, M.R.C.S., Senior Assistant Medical Officer, Royal Lunatic Hospital, Cheadle, near Manchester.

1880. Seccombe, George, L.R.C.P.L., The Colonial Lunatic Asylum, Port of Spain, Trinidad, West Indies.

1879. Seed, William, M.B., C.M.Edin., The Poplars, 110, Waterloo Road, Ashton-on-Ribble, Preston.

1889. Sells, Charles John, L.R.C.P., M.R.C.S., L.S.A., White Hall, Guildford.

1882. Seward, W. J., M.B.Lond., M.R.C.S., Medical Superintendent, Colney Hatch, Middlesex.

1891. Shaw, Harold B., B.A., M.B., B.B., D.P.H.Camb., Medical Superintendent, Isle of Wight County Asylum, Whitecroft, Newport, Isle of Wight.

1880. Shaw, James, M.D., 310, Kensington, Liverpool.

1867. Shaw, Thomas C., M.D.Lond., F.R.C.P.Lond., Medical Superintendent, London County Asylum, Banstead, Surrey.

1882. Sheldon, T. S., M.B., Medical Superintendent, Cheshire County Asylum, Parkside, Macclesfield.

1898. Sherrard, David John, B.A., M.B., M.Ch.Dubl., The Laurels, Hailsham, Sussex.

1896. Shortt, William Rushton, M.B., B.S.Durh., M.R.C.S., L.R.C.P.Lond., 20, Victoria Square, Newcastle-on-Tyne.

1877. Shuttleworth, G. E., M.D.Heidelb., M.R.C.S. and L.S.A.Eng., B.A.Lond., late Medical Superintendent, Royal Albert Asylum, Lancaster; Ancaster House, Richmond Hill, Surrey.

1899. Sibley, Reginald Oliver, M.B.Lond., M.R.C.S., L.R.C.P., Assistant Medical Officer, London County Asylum, Cane hill, Purley, Surrey.

1895. Simpson, Francis Odell, M.R.C.S., L.R.C.P., Senior Assistant Medical Officer, County Asylum, Rainhill, near Liverpool.

1889. Simpson, Samuel, M.B. and M.C.H.Dubl., M.P.C., St. Mark's Road, Enfield.

1888. Sinclair, Eric, M.D., Medical Superintendent, Gladesville Asylum, New South Wales.

1870. Skae, C. H., M.D.St. And., Medical Superintendent, Ayrshire District Asylum, Glengall, Ayr.

1891. Skeen, James Humphrey, M.B., C.M.Aberd., Medical Superintendent, Glasgow District Asylum, Bothwell.

1898. Skeen, William St. John, M.B., C.M., County Asylum, Winterton, Ferryhill, Durham.

1897. Smalley, Herbert, M.D.Durh., L.R.C.P., M.R.C.S., Prison Commission, Home Office, Whitehall, S.W., and 62, York Mansions, Battersea Park, London.

1899. Smith, J. G., M.D., County Asylum, Hanwell, London, W.

1885. Smith, R. Percy, M.D., B.S., F.R.C.P., M.P.C., 36, Queen Anne Street, Cavendish Square, W. (*General Secretary*, 1896–7.)

1858. Smith, Robert, M.D.Aberd., L.R.C.S.Edin., Medical Superintendent, County Asylum, Sedgefield, Durham.

1884. Smith, W. Beattie, F.R.C.S.Edin., L.R.C.P.Lond., Medical Superintendent, Hospital for the Insane, Kew, Melbourne, Victoria.

1892. Smyth, W. Johnson, M.B.Edin., Durley Gardens, Bournemouth.

1881. Snell, George, M.D.Aberd., M.R.C.S.Eng., Medical Superintendent, Public Lunatic Asylum, Berbice, British Guiana.

1885. Soutar, J. G., Barnwood House, Gloucester.

1883. Spence, J. B., M.D., M.C., The Asylum, Colombo, Ceylon.

1875. Spence, J. Beveridge, M.D., M.C.Queen's Univ., Medical Superintendent, Burntwood Asylum, near Lichfield. (PRESIDENT, formerly *Registrar*.)

1899. Spicer, A. H., M.B., B.S.Lond., Assistant Med. Officer, Claybury Asylum, Woodford Bridge, Essex.

1898. Sproat, James Hugh, M.B.Lond., M.R.C.S., L.R.C.P., Somerset and Bath Asylum, Wells.

1891. Stansfield, T. E. K., M.B., C.M.Edin., The Heath Asylum, Bexley, Kent.

1898. Steen, Robert H., M.D.Lond., West Sussex Asylum, near Chichester.

1899. Stevens, Reginald C. J., M.B., B.S.Durh., County Asylum, Exminster, Devon.

1868. Stewart, James, B.A.Queen's Univ., F.R.C.P.Edin., L.R.C.S.Irel., late Assistant Medical Officer, Kent County Asylum, Maidstone; Dunmurry, Sneyd Park, near Clifton, Gloucestershire.

1884. Stewart, Robert S., M.D., C.M., Assistant Medical Officer, County Asylum, Glamorgan.
1887. Stewart, Rothsay C., M.R.C.S., Medical Superintendent, County Asylum, Leicester.
1862. Stilwell, Henry, M.D.Edin., M.R.C.S.Eng., Moorcroft House, Hillingdon, Middlesex.
1864. Stocker, Alonzo Henry, M.D.St. And., M.R.C.P.Lond., M.R.C.S.Eng., Medical Superintendent, Peckham House Asylum, Peckham.
1897. Stoddart, William Henry Butter, M.D., B.S.Lond., M.R.C.S.Eng., M.R.C.P.Lond., Bethlem Royal Hospital, London, S.E.
1881. Strahan, S. A. K., M.D., Assistant Medical Officer, County Asylum, Berrywood, near Northampton.
1868. Strange, Arthur, M.D.Edin., Medical Superintendent, Salop and Montgomery Asylum, Bicton, near Shrewsbury.
1896. Straton, Charles Robert, F.R.C.S.Edin., Medical Visitor, Fisherton House and Laverstock House, West Lodge, Wilton, Wilts.
1885. Street, C. T., M.R.C.S., L.R.C.P., Haydock Lodge, Ashton, Newton-le-Willows, Lancashire.
1897. Stuart, Robert, M.R.C.S., L.R.C.P.Lond., 20, New Elvet, Durham.
1886. Suffern, A. C., M.D., Medical Superintendent, Ruberry Hill Asylum, near Bromsgrove, Worcestershire.
1894. Sullivan, W. C., M.D.R.U.I., Deputy Medical Officer, H.M. Prison, Parkhurst, Isle of Wight.
1898. Sutcliffe, John, M.R.C.S., L.R.C.P., Royal Asylum, Cheadle, near Manchester.
1870. Sutherland, Henry, M.D.Oxon, M.R.C.P.Lond., 21, New Cavendish Street, Portland Place, W.
1895. Sutherland, John Francis, M.D.Edin., Deputy Commissioner in Lunacy, 4, Merchiston Bank Avenue, Edinburgh.
1868. Swain, Edward, M.R.C.S., Medical Superintendent, Three Counties Asylum, near Hitchin, Herts.
1877. Swanson, George J., M.D.Edin., The Pleasaunce, Heworth Moor, York.
1897. Tait, James Sinclair, M.D., L.R.C.P.Lond., L.R.C.S.Edin., Medical Superintendent, Hospital for Insane, St. John's, Newfoundland.
1857. Tate, William Barney, M.D.Aberd., M.R.C.P.Lond., M.R.C.S.Eng., Medical Superintendent of the Lunatic Hospital, The Coppice, Nottingham.
1897. Taylor, Frederic Ryott Percival, M.D., B.S.Lond., M.R.C.S.Eng., L.R.C.P.Lond., Darenth Asylum, Dartford, Kent.
1899. Taylor, Inglis, M.B., C.M., F.R.C.S.Edin., 24, Wimpole Street, London, W.
1890. Telford-Smith, Telford, M.A., M.D., Medical Superintendent, Royal Albert Asylum, Lancaster.
1899. Thom, J. Maxtone, M.B., C.M., D.P.H., Surgeon, H.M. General Prison, Barlinnie, near Glasgow.
1888. Thomas, E. G., Park House, Caterham, Surrey.
1880. Thomson, D. G., M.D., C.M., Medical Superintendent, County Asylum, Thorpe, Norfolk.
1898. Todd, Percy Everald, M.B., Acting Medical Superintendent, Port Alfred Asylum, Cape Colony, South Africa.
1896. Townsend, Arthur, M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer, Hospital for Insane, Barnwood House, Gloucester.
1881. Tuke, Charles Molesworth, M.R.C.S.E., Chiswick House, Chiswick.
1888. Tuke, John Batty, jun., M.B., C.M., M.R.C.P.E., Resident Physician, Saughton Hall, Edinburgh.
1885. Tuke, T. Seymour, M.B., B.Ch.Oxford, M.R.C.S.E., Chiswick House, Chiswick, W.
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PREPARED BY DR. J. TURNER.

Absinthe. Beitrag zur Lehre von der absteigenden Degeneration in Gehirn und Rückenmark und Bemerkungen über die Localisation und die Leitungsbahnen der Krämpfe bei der Absynth-Epilepsie. R. Boyce. Neurol. Centralbl., Leipz., 1894, xiii, 466-470.

Address. Some remarks on the address delivered to the American Psychological Association, by S. Weir Mitchell, M.D., May 16th, 1894. Am. J. Insan., Chicago, 1894-5, li, 171-181. W. Channing.

——— Address before the fiftieth Annual Meeting of the American Medico-Psychological Association, held in Philadelphia. S. W. Mitchell. May 16th, 1894. J. Nerv. and Ment. Dis., N.Y., 1894, xxi, 413-437.

Ages. Ages and death-rates of lunatics in the district where accumulation of lunatics is most advanced. T. A. Chapman. J. Ment. Sc., Lond., 1894, xl, 485-393, 4 ch.

Alt Scherbitz. The great Asylum of Alt Scherbitz, near Leipzig. C. Norman. *Ibid.*, 494.

Alienists. New England alienists of the last half-century. T. W. Fisher. Am. J. Insan., Chicago, 1894-5, li, 161-170.

Alimentary. Concerning some of the alimentary affections in the insane. Amelia Gilmore. Philad. Hosp. Rep., 1893, ii, 198-205.

Aphonia. Pseudo-hysterical aphonia. F. B. Eaton. J. Am. M. Ass., Chicago, 1894, xxiii, 452.

Arteries. Sulla disposizione delle arterie della base dell' encefalo nei normali enegli alienati. A. Mori. Monitore zool. ital., Firenze, 1893, iv, 179-202.

Assisi. S. François d'Assise. Étude sociale et médicale. A. Bournet. Lyon, 1893, A. Storch, 198 pp., 2 pl., post 8vo.

Asylums. Zur inneren Organisation der Irrenanstalten. Für Irrenärzte und höhere Verwaltungsbeamte. Schaefer. Hamburg, 1894, O. Meissner, 19 pp. 12mo.

——— Kjöbenhavns Sindssygeanstalt i forrige Aarkundrede. [. . . insane asylums in the last century.] Hosp.-Tid., Kjöbenh., 1893, 4 R., i. G. Norrie. 790-794.

——— Difficulties which prevent the realisation of Dr. Mitchell's ideal hospital for the insane. L. S. Hinckley. J. Nerv. and Ment. Dis., N.Y., 1894, xxi, 597-604.

——— Development of the present hospital for the insane. W. W. Godding. Am. J. Insan., Chicago, 1894, li, 64-70.

——— Insane asylum management. S. A. Cunningham. Cincinn. Lancet-Clinic, 1894, n.s., xxxiii, 520-522.

Amentia. [Case of periodical amentia.] A. J. Yuschenko. Arch. psichiat. &c., Charkov, 1894, xxiii, 83-97.

Auto-intoxication. Des auto-intoxications dans les maladies mentales. J. Séglas. Arch. gén. de méd., Par., 1893, ii, 532-555.

——— Des auto-intoxications dans les maladies mentales. Lavaure-Chevalier et Regis. [Rap.] Ann. de psychiat. et d'hypnol., Par., 1893, n.s., iii, 261-274.

——— Om Autointoksikationspsychiater. D. E. Jacobson. Biblioth. f. Laeger, Kjöbenh., 1894, 7 R., v, 153-186.

——— Ueber Autointoxications-Psychosen. Allg. Ztschr. f. Psychiat., &c., Berl., 1894, li, 379-406.

Automatism. Automatisme ambulatoire. Ann. méd.-psych. R. Semelaigne. Par., 1894, 7 s., xix, 71-87.

——— Automatisme dans la période d'aura des attaques; variations spontanées de la sensibilité et surtout du champ visuel, correspondant aux phénomènes d'automatisme. Séglas. Cong. ann. de méd. ment., C.-r., 1892, Blois, 1893, iii, 309-322.

Barbe Buvée. Barbe Buvée, en religion, sœur de Sainte-Colombe, et la prétendue possession des Ursulines d'Auxonne (1658-1663); (étude historique et médicale, d'après des manuscrits de la Bibliothèque nationale et des Archives de l'ancienne province de Bourgogne). S. Garnier. Arch. de neurol, Par., 1894, xxvii, 352, 418; xxviii, 18, 111, 196, 296.

Blood. Ueber den Hämoglobingehalt und das specifische Gewicht des Blutes bei Geisteskranken. Vorster. Allg. Ztschr. f. Psychiat., &c., Berl., 1893-4, l, 740-760.

——— On the value of examination of the blood of the insane. J. A. Houston. Boston M. and S. J., 1894, cxxx, 53-56.

Body weight. Body weight and mental improvement. A. R. Moulton. Am. J. Insan., Chicago, 1894-5, li, 209-220.

Borderlands. Borderlands and crankdom. J. Weir, jun. Med. Rec., N.Y., 1894, xlv, 360-362.

Bunyan. The case of John Bunyan. J. Royce. Psychol. Rev., N.Y. and Lond., 1894, i, 22, 134, 230.

Care. Care of the insane in Finland. E. Hougberg. Am. J. Insanity, Utica, N.Y., 1893-4, i, 390-393.

——— Die nächste Aufgabe der Irrenpflege. Scholz. Allg. Ztschr. f. Psychiat., &c., Berl., 1893-4, l, 690-704.

——— The care and treatment of the insane in private practice. J. T. Wilson. Virginia M. Month., Richmond, 1893-4, xx, 1100-1116.

——— Alienacão mental após a extracção de cataracta dupla. Sousa Refoios. Rev. de med. e cirurg., Lisb., 1894, i, 33-41.

Children. Causation and early treatment of mental disease in children. A. W. Wilmarth. J. Am. M. Ass., Chicago, 1894, xxiii, 271-274.

Climacteric. Climacteric insanity. G. L. Sinclair. Internat. Clin., Philad., 1894, 3 s., iv, 147-152.

——— The insanity of the climacteric period. E. Goodall. J. Ment. Sc., Lond., 1894, xl, 235-242.

Classification. Clasificación frenopática. Ots. Corresp. méd., Madrid, 1894, xxix, 155, 165, 172, 189, 196.

Colonies. Riu. C.-r., 1892, Blois, 1893, iii, 63-70, e G. Albertotti. Les colonies d'aliénés. Cong. ann. de méd. ment.

——— [Colony of the insane at Lipova Mountain.] A. Ponomareff. Arch. psichiat., &c., Charkov, 1894, xxiv, 67-91.

——— [Sur l'installation d'une colonie pour les aliénés au gouvernement Poltava.] A. Maltzeff, Zemsk. vrach, Poltava, 1893, vi, 584, 605, 625.

——— A New British epileptic colony. Brit. M. J., Lond., 1894, i, 1371.

Confusion. La confusion mentale. Henri Hannion. Par., 1894, G. Steinheil, 123 pp. 8vo.

——— De la confusion mentale primitive. J. Séglas. Arch. gén. de méd., Par., 1894, i, 538, 665.

Cowper. The life of William Cowper. [Rev.] T. Wright. J. Ment. Sc., Lond., 1894, xl, 79, 254.

Crank. The modern crank and mental responsibility. J. Punton. Tri-State M. J., Keokuk, 1893-4, i, 75-85.

Criminals. Osservazioni statistico-cliniche sui criminali-pazzi. G. Algeri. Arch. di psichiat., &c., Torino, 1894, xv, 408-411.

——— Insanity among Criminals. H. E. Allison. Am. J. Insan., Chicago, 1894-5, li, 54-63.

——— Die Unterbringung von geisteskranken Verbrechern. R. Schroeter. Allg. Ztschr. f. Psychiat., &c., Berl., 1894, li, 432-446.

Colonisation. Die Kolonisirung der Geisteskranken in Verbindung mit dem Offen-Thür-System, ihre historische Entwickelung und die Art ihrer Ausführung auf Rittergut Alt-Scherbitz. Paetz (Albrecht), Berl., 1893, J. Springer, 252 pp., 6 pl., 1 plan, 8vo.

Dante. Le nevrosi in Dante e Michelangelo. C. Lombroso. Arch. di psichiat., &c., Torino, 1894, xv, 126-132.

——— Dante e la psichiatria: lettera à Cesara Lombroso. B. Chiara. Arch. di psichiat., &c., Torino, 1894, xv, 455-462.

Degenerates. Un casò di teratofilia in un degenerato. Bull. d. sc. med. di Bologna. B. Galli-Valerio. 1893, 7 s., iv, 761-763.

——— Dégénérescence. Traduit de l'allemand par Auguste Dietrich. 2 vols. Max Nordau. Par., 1894, F. Alcan, 437, 575 pp. 8vo.

——— The need of special accommodation for the degenerate. J. Morel. J. Ment. Sc., Lond., 1894, xl, 597-605.

——— Dégénérescence mentale et syndromes épisodiques multiples avec délire polymorphe chez un même sujet. Magnan. Compt.-rend. Soc. de Biol., Par., 1894, 9 s., vi, pt. 2, 1-5.

——— Les délires des dégénéres. Magnan. Bull. méd., Par., 1894, viii, 73-76.

——— Dégénérés et déséquilibrés. J. Dallemagne. Brux., 1894, H. Lamertin, 661 pp. 8vo.

Delirium. Contributo all' etiologia e patogenesi del delirio acuto. Riforma med., Napoli, 1893, ix, pt. 3, 831-835.

——— Ueber den Wahn: eine klinische-psychologische Untersuchung nebst einer Darstellung der normalen Intelligenvoorgänge. M. Friedmann. Wiesbaden, 1894, F. Bergmann, 207 pp. 8vo.

——— Stic nei pazzi studiat in rapporto al delirio. (Santangelo, F. Spoto.) Palermo, 1894, C. Clausen, 49 pp. 8vo.

Dementia. Contribution à l'étude de la démence précoce. A. Vigouroux. Ann. méd.-psych., Par., 1894, 7 s., xix, 62-70.

——— Irritative dementia, with bony thickening, following injury; temporary improvement. J. W. Springthorpe. Austral. M. J., Melbourne, 1893, n.s., xv.

——— Démence progressive et inco-ordination des mouvements dans les quatre membres, chez deux enfants, le frère et la sœur. Rev. neurol. (Boochaud), Par., 1894, ii, 2-7.

——— Report of a case of syphilitic dementia. H. H. Herzog. North-west. Lancet, St. Paul, 1894, xiv, 167-169.

Dipsomania. De l'obsession et de l'impulsion en général, et de l'impulsion à boire en particulier (dipsomanie). Legrain. Ann. de la Policlin. de Par., 1894, iv, 201, 233.

Electricity. Sensibilita elettrica generale e dolorifica examinate col faradireometro in pazzi e normali. Arch. di psichiat., &c. L. Roncoroni. Torino, 1893, xiv, 423-429, 1 pl.

Epileptics. Suite de la discussion des rapports de M. Masoin sur l'hospitalisation des épileptiques. Bull. Acad. roy. de Méd. de Belg., Brux., 1894, 4 s., viii, 154-182.

Epilepsy. Epilepsy in a puerpera with hyperpyrexia; death. T. Oliver. Lancet, Lond., 1894, i, 1295-1297.

——— Ueber den Einfluss intercurrenter Krankheiten und physiologischer Processe auf die Epilepsie. E. Beckhaus. Ann. d. städt allg. Krankenh. zu München (1890-2), 1894, 187-218.

——— Psychical Epilepsy. S. J. Fort. Med. and Surg. Reporter, Philad., 1894, lxx, 375-377.

——— L'occhio negli epilettici: studio anthropologico e medico-legale. F. P. e G. Dotto. De Bono, Pisani, Palermo, 1893, xiv, 91-257, 1 pl.

——— Ein Fall Von "Reflexepilepsie" beim Pferde. H. Därrwächter Deutsche thierärztl. Wchnschr., Karlsruhe, 1894, ii, 17.

——— The seat of origin and paths of conduction of the fits in absinthe epilepsy. R. Boyce. Brit. M. J., Lond., 1893, ii, 1097.

——— Il temperamento epilettico. F. Del Greco. Manicornio mod., Nocera, 1893, ix, 123-126.

Epilepsy. Modificazioni della circolazione cerebrale nell' uomo nella epilessia e sotto l' azione di due nuovi farmaci ipnogeni; cloralamide e solfato neutro di duboisina. V. Capriati. Ann. di nevrol., Torino, 1893, n. s., xi, 298-325, 1 ch.

——— Epilepsy, Med. and Surg. Reporter, Philad. J. A. Larrabee. 1894, lxx, 447-450. Also, Am. Pract. and News, Louisville, 1894, xvii, 208-214. Also, South M. Rec., Atlanta, 1894, xxiv, 175-182.

——— Statistischer Beitrag zur Aetiologie der Aepilepsie. Liebe. Schweizerhof. . . . f. Nerv. u. Psych.-Kranke. weibl. Geschl., 4to, Berl., 1893, ii, 54-62.

——— Die Epilepsia tarda. E. Mendel. Deutsche med. Wchnschr., Leipz. u. Berl., 1893, xix, 1106-1108.

——— Tranquilli. Pensuto. Un caso di automatismo ambulatario postepilettico. Gazz. d. osp., Milano, 1893, xiv, 1122-1124.

——— Sur un cas d'épilepsie Jacksonienne avec accès de tachycardie paroxistique de nature épileptoïde. A. Pitres. Arch. clin. de Bordeaux, 1894, iii, 97-112.

——— Ueber Epilepsie. Ztschr. f. d. Behandl. Schwachsinn. u. Epilept. Wildermuth. Dresd., 1894, n. F., x, 25, 41.

——— Epilepsie im Gefolge von Herzkrankheiten. H. Rosin. Med.-chir. Centralbl., Wien, 1893, xxviii, 608-610.

——— A report of two cases of procursive epilepsy. C. S. Potts. Univ. M. Mag., Philad., 1893-4, vi, 696.

——— Patient suffering from Jacksonian epilepsy with sensory defect. A. Robertson. Glasgow M. J., 1894, xli, 450-453.

——— Zur Behandlung der Epilepsie nach Flechsig. L. Stembo. St. Petersb. med. Wchnschr., 1894, n. F., xi, 137.

——— Remarks on senile epilepsy. E. M. Sympson. Brit. M. J., Lond., 1894, i, 1069.

——— Dei caratteri psicopatici dell' epilessia. P. Saroli. Gior. med. d. r. esercito, &c., Roma, 1894, xliii, 532-537.

——— Combined motor and psychical epilepsy: report of a case. W. P. Spratling. Med. and Surg. Reporter. Philad., 1894, lxxi, 205-207. On epilepsy in early life, with especial reference to the colony system in the care and treatment of epileptics. Med. News, Philad., 1894, lxv, 291-295.

——— Folie épileptique; ivresse pathologique. Delbastée. Presse méd. belge, Brux., 1894, xlvi, 257, 265.

——— Tipo completo di pazzia morale a base epilettica. M. Carrara. Riforma med., Napoli, 1894, x, pt. 3, 520, 531.

——— Einige Bemerkungen über senile Epilepsie. E. M. Sympson. Internat. klin. Rundschau, Wien, 1894, viii, 1013-1015.

——— Some remarks on epilepsy, and the care of epileptics on the colony plan. W. E. Drewry. Virginia M. Month, Richmond, 1894-5, xxi, 477-492.

——— Notes on two hundred and fifty cases of epilepsy. R. K. Macalester. N. York M. J., 1894, lix, 107, 237.

——— Neuere Arbeiten über Epilepsia. Seeligmüller. Deutsche med. Wchnschr., Leipz. u. Berl., 1894, xx, 12; 33, 62.

——— Zur Behandlung der Epilepsie. München med. Wchnschr., 1894, xli, 224, 251, 270. K. Alt.

——— L' asimmetria del cranio nell' epilessia del cavallo. R. Bassi. Arch. di psichiat., &c., Torino, 1894, xv, 122.

——— Sobre las relaciones nosologicas entre el asma q la epilepsia. (Transl.) M. G. Echeverria. Rev. de cien. med., Habana, 1893, viii, 253-258.

——— Note sur les oscillations de poids chez les épileptiques. C. Féré. Compt.-rend. Soc. de Biol., Par., 1893, 9 s., v, 891. Note sur l'influence de l'érysipèle sur la marche de l'épilepsie. *Ibid.*, 828-830.

——— Study of the causes, symptoms, and treatment of partial epilepsy. R. Macouzet. Alienist and Neurol, St. Louis, 1894, xv, 67-68.

——— Tremor saltatorius postepilepticus. W. Pascheles. Prag. med. Wchnschr., 1893, xviii, 593.

——— Epilepsy. F. E. Waxham. Denver M. Times, 1893-4, xiii, 311-317.

——— Ueber epilepsie, Wildermuth. Med. Cor.-Bl. d. württemb. ärztl. Ver., Stuttg., 1894, lxiv, 1-7.

——— The nature of epilepsy. J. W. Anderson. Internat. Clin., Philad., 1893, 3 s., iii, 97-103.

Epilepsy. Remarks upon the medicinal treatment of chronic epilepsy. E. D. Bondurant. Am. J. Insan., Chicago, 1894-5, li, 23-39.

——— L'albuminuria post-epilettica. Gazz. med. lomb., Milano, 1894, xv, 181, 191, 201, 211.

——— I disturbi visivi degli epilettica. L. Cognetti. Gior. med. d. r. esercito, &c., Roma, 1894, xlii, 652-682.

——— Accessi epilettiformi per cicatrice deforme. Policlin., Roma, 1893-4, i, 258-262.

——— Folie épileptique; ivresse pathologique. Delbastée. Presse méd. belge, Brux., 1894, xlvi, 257.

——— Caso di epilessia guarito colla belladonna e colla Sorrente elettrica. Riv. clin. e. terap., Napoli, 1894, xvi, 285.

——— Note sur un poussin mort à la suite d'accès d'épilepsie. C. Féré. C.-rend. Soc. de Biol., Par., 1894, 10 s., i, 618.

——— Epilepsy dependent upon Phimosis. A. E. Garrett. Texas Cour.-Rec. Med., Dallas, 1893-4, xi, 295, 298.

——— The infantile causes of epilepsy. W. R. Gowers. Clin. J., Lond., 1894, iv, 309-312.

——— Reflexepilepsie nach Unfall. Knopf. Deutsche med. Wchnschr., Leipz. u. Berl., 1894, xx, 681.

——— L'epilettico volgare e la responsabiltà. L. Lojacono. Rassegna clin. e statist. d. Villa di Salute di Palermo, 1893, iii, 79-93.

——— Otto anni di epilessia d'origine riflessa; guarigione coll' ablazione della causa. L. Mazzoleni. Boll. d. Soc. med. prov. di Bergamo, 1894, v, 31.

——— L'épilepsie tardive (epilepsia tarda). Mendel. en Ann. de psychiat. et d'hypnol., Par., 1894, n. s., iv, 236-238.

——— Treatment of epilepsy by *Solanum carolinense*. W. J. Herdman. Tr. Mich. M. Soc., Detroit, 1894, xviii, 198-212.

——— Ueber einen ungewöhnlichen Fall von Epilepsia nocturna. F. Lehmann. Allg. Ztschr. f. Psychiat., &c., Berl., 1894, li, 370-378.

——— Demonstration eines Falles von Rindenepilepsie, geheilt durch die Trepanation. E. Leyden. Berl. klin. Wchnschr., 1894, xxxi, 839-841.

——— Eine Bemerkung zur Behandlung der Epilepsie. C. Moeli. Therap. Monatsh., Berl., 1894, viii, 436-442.

——— The eye treatment of epilepsy. A. L. Ranney. N. York M. J., 1894, lx, 407-409.

——— Ricerche analitiche sopra la presenza della creatinina nelle orine degli epilettici. E. Rossi. Ann. di freniat., &c., Torino, 1893-4, iv, 363-395.

——— L'occhio degli epilettici: studio antropologico e medico-legale. (F. P.) De Bono e G. Dotto. Arch. di ottal., Palermo, 1893-4, i, 129, 155, 197, 234, 277, 1 pl.

——— Sensory and psychical epilepsy. T. Diller. N. York M. J., 1894, lix, 398.

——— Note sur un cas de sialorrhée épileptique. C. Féré. Compt.-rend. Soc. de Biol., Par., 1894, 10 s., i, 258.

——— Un caso di tremore epilettico. A. Giannelli. Riforma med., Napoli, 1894, x, pt. 1, 651-653.

——— A case of procursive epilepsy. A. W. Hoisholt. Occidental M. Times, Sacramento, 1894, viii, 177-184.

——— Nye undersögelser over epilepsi med. demonstrationer af experimenter paa dyr. H. Holm. Tidsskr. f. d. norske Laegfor., Kristiania and Kjöbenh., 1894, xiv, 1-6.

——— Epilepsie in Folge einer Herzkrankheit. M. Hubergritz. Internat. klin. Rundschau, Wien, 1894, viii, 271-274.

——— Epileptiforme Anfälle, durch Veränderungen in den Nasenhölen hervorgerufen: zwei Fälle. F. Kjelman. Berl. klin. Wchnschr., 1894, xxxi, 316.

——— A Presidential Address on the influence of extreme slowness of pulse in the causation of epileptiform convulsions. J. S. Bristowe. Lancet, Lond., 1894, ii, 671-673.

——— Gravi manifestazioni isteriche in un epilettico. L. De Martiis Cognetti. Gazz. d. osp., Milano, 1894, xv, 899.

Epilepsy. Some recent measures in the treatment of epilepsy, with special reference to the use of opium: a year's experience with Flechsig's plan. J. Collins. Med. Rec., N. York, 1894, xlvi, 355-360.

——— Nocturnal Epilepsy. F. W. D'Evelyn. Tr. M. Soc. Calif., San Franc., 1894, 218-222.

——— De l'exhibition chez les épileptiques. H. Pribat. Par., 1894, G. Steinheil, 60 pp. 8vo.

——— Ueber die Behandlung der Epilepsie, insbesondere mit Opium-Brom nach Flechsig. Carl Salzburg. Leipz., 1894, Veit and Co., 60 pp. 8vo.

——— Epilepsy, at times a bladder reflex. H. K. Aiken. Med. Rec., N. Y., 1894, xlvi, 556.

——— Ueber die Bedeutung der corticalen Epilepsie für die topische Diagnostic der Gehirnkrankheiten. St. Petersb. med. Wchnschr. K. Dehio, 1894, n. F., xi, 325-328.

——— La epilepsia nocturna y sus diferencias del sonambulismo. Rev. de cien. méd., Habana, 1894, ix, 233-242. M. G. Echeverria.

——— An address on the dynamics of life in relation to the nature of epilepsy. W. R. Gowers. Lancet, Lond., 1894, ii, 1015, 1080.

——— Note on convulsive seizures. W. H. Hattie. Maritime M. News, Halifax, 1894, vi, 389-393.

——— Die staatliche Fürsorge für Epileptiker. G. W. Jackoby. N. Yorker med. Monatsschr., 1894, vi, 347-353.

——— [Typical cases of cortical epilepsy.] A. Y. Kozhevnikoff. Med. Obzr., Mosk., 1894, xlii, 97-118.

——— The treatment of epilepsy, with notes on the influence of *Solanum carolinense* in controlling the seizures. Indiana M. J., Indianap., 1894-5, xiii, 149-154.

——— Sulla genesi corticale della epilessia. P. Penta. [Abstr.] N. riv. di psichiat., &c., Napoli, 1894, ii, 12-15.

——— Een geval van reflex-epilepsie. J. Rotgans. Nederl. Tijdschr. v. Geneesk., Amst., 1894, 2 R., xxx, pt. 2, 112-118.

——— Ueber Rinder-Epilepsie und ihre chirurgische Behandlung. R. Wichmann. Aerztl. Prakt., Hamb., 1894, vii, 1033, 1057.

——— A remarkable case probably allied to epileptic automatism. W. S. Colman. Lancet, Lond., 1894, ii, 128.

——— Automatisme comitial ambulatoire. Roskam. Ann. Soc. méd.-chir. de Liège, 1894, xxxiii, 275-282.

——— An epileptic (?) fit followed by forty-six hours' unconsciousness. F. Roth. Lancet, Lond., 1894, ii, 190.

——— Obscure forms of epilepsy. M. P. Sexton. Med. Rev., St. Louis, 1894, xxx, 66.

——— Distribution géographique de l'épilepsie. Gélineau. I. d'hyg., Par., 1894, xix, 301, 315, 327.

——— De l'épilepsie thalamique. W. A. Hammond. Ann. de psychiat. et d'hypnol., Par., 1894, n. s., iv, 33, 68.

Epileptics. State case of epileptics. M. N. Voldeng. Tr. Iowa M. Soc., Omaha, 1893, xi, 35.

——— On the care of epileptics. Peterson. Am. J. Insan., Utica, N.Y., 1893-4, i, 362-371.

Erotomania. Curieuses érotomanes. Hospital. Ann. méd.-psych., Par., 1894, 7 s., xix, 55-61.

Feeble-minded. Feeble-minded children. Nineteenth Cent., Lond. Sir D. Galton. 1894, xxxv, 276-283.

Feeding. Artificial feeding of the insane. J. Neil. Brit. M. J., Lond., 1894, i, 883.

——— Artificial feeding in acute melancholia. J. Neil. Brit. M. J., Lond., 1894, i, 183.

——— The forcible feeding of the insane. W. W. Herbert. Brit. M. J., Lond., 1894, i, 462.

Folie à Deux. À propos de la folie à deux. F. L. Arnaud. France méd., Par., 1893, xl, 690-692.

Folie à Deux. De la folie à deux et de ses trois grandes variétés cliniques. E. Montyel de Marandon. Gaz. d. hôp., Par., 1894, lxvii, 702, 724, 752, 762.

Gastric Juice. Sulla tossicizà del succo gastrico delgi alienati. E. Masetti. Riv. sper. di freniat., Reggio-Emilia, 1894, xx, pt. 2, 204-217.

Genius. Genius and degeneration. J. Weir, jun. Med. Repr., Lond., 1894, v, 113.

——— Les infirmités du génie. Rev. de méd. lég. Cabanès. Par., 1893-4, i, 33-38.

Generative Organs. Some abnormal conditions of the generative organs associated with melancholia or mania. W. G. Wylie. Med. Rec., N. Y., 1894, xlvi, 135.

General Paralysis. Contribution à l'anatomie pathologique de la paralysie générale. Joffray. Cong. ann. de méd. ment., C.-r., 1892; Blois, 1893, iii, 240-250.

——— Zur Frage über die allgemeine progressive Paralyse der Irren und ihre Behandlung bei den Syphilitikern. J. G. Platonnow. Centralbl. f. Nervenh. u. Psychiat., Coblenz and Leipz., 1893, n. F., iv, 505-518.

——— Note sur un cas de paralysie générale vraie consécutive à une encéphalopathie saturnine. C. Vallon. Cong. ann. de méd. ment., C.-r., 1892; Blois, 1893, iii, 259.

——— Aetiologisches und Symptomatologisches zur Lehre von der progressiven Paralyse der Frauen. A. Westphal. Charité-Ann., Berl., 1893, xviii, 719-731.

——— Progressive paralysis in women: its etiology; special course of disease. J. D. Jedanoff. Arch. psichiat., &c., Charkoff, 1893, xxii, No. 2, 36-87.

——— Case of marked improvement in general paralysis, with remarks on the treatment. H. Robertson. Glasgow M. J., 1893, xl, 414-418.

——— Dementia paralytica sine paralysi. J. Belkowsky. Centralbl. f. Nervenh. u. Psychiat., Coblenz und Leipz., 1894, n. F., v, 169-176.

——— The relative importance of the minute historical features of the brain cortex in general paralysis. E. C. Carter. Brain, Lond., 1893, xvi, 393-404.

——— Beiträge zur Kenntniss der Aetiologie der progressiven Paralyse, mit besonderer Berücksichtigung der Syphilis. E. Hongberg. Allg. Ztsch. f. Psychiat., &c., Berl., 1893-4, l, 546-629.

——— Paralysie générale; lésions et symptômes spinaux; formes spinales. Mercredi med., Klippel. Par., 1894, v, 85-87.

——— Influenza della sifilide sulla paralisi progressiva. Gior. internaz. d. sc. med., Napoli, 1893, n. s., xv, 732-748. M. Pelli.

——— Zur Aetiologie und Symptomatologie der progressiven Paralyse, mit besonderer Berücksachtigung des Traumas und der im jugendlichen Alter vorkommenden Fälle von Paralyse. H. Gudden. Arch. f. Psychiat., Berl., 1894, xxvi, 430-471.

——— The trophoneuroses of paretic dementia. F. C. Hoyt. Am. J. Insan., Chicago, 1894-5, li, 51-53.

——— Effetti di prolungate e abbondanti suppuzazioni nella paralisi progressiva, con applicazioni terapeutiche. A. Marro e A. Ruata. Gior. d. R. Accad. di Med. di Torino, 1894, 3 s., xlii, 381-387.

——— De la forme infantile de la paralysie générale. A. Moussons. Méd. inf., Par., 1894, i, 449-452.

——— Progressive Paralyse im Pubertätsalter, München. med. Wchnschr., 1894, xli, 617-619.

——— Das Ulnaris-Symptom bei Geisteskranken insbesondere bei der progressiven Paralyse. A. Cramer. München. med. Wchnschr., 1894, xli, 552, 573.

——— Paralysie générale à forme mélancolique d'emblée. Limousin méd., Limoges, 1894, xviii, 86-88.

——— Symptomes spasmodiques et contractures permanentes dans la paralysie générale. Marc Fréuel. Par., 1894, G. Steinheil, 135 pp. 8vo.

——— Des lésions histologiques de la paralysie générale étudiées d'après la méthode de Golgi. Azoulay et Klippel. Arch. de neurol., Par., 1894, xxviii, 81-91.

General Paralysis. Intorno a un caso di demenza paralitica combinata con afasia. G. Mingazzini. Bull. d. R. Acad. Med. di Roma, 1892-3, xix, 156-167.

——— Anatomie et physiologie pathologiques de la paralysie générale. Bull. méd., Par., 1894, viii, 553-555. Joffroy.

——— Les hallucinations dans la paralysie générale. Jacques Baruk. Par., 1894, G. Steinheil, 101 pp. 8vo.

——— Dementia paralytica in the negro. H. J. Berkley. Johns Hopkins Hosp. Bull., Balt., 1893, iv, 94-97.

——— Dementia paralytica in the negro race. H. J. Berkley. Johns Hopkins Hosp. Rep., Balt., 1894, iv, 171-208, 1 pl.

——— A case of general paralysis of the insane at the time of puberty. H. C. Bristowe. Brit. M. J., Lond.

——— On general paralysis (with a critical digest). W. J. Mickle. Brain, Lond., 1893, xvi, 50-85.

——— General paresis, a toxine disease? H. M. Bannister. Am. J. Insan., Utica, N. Y., 1893-4, l, 477-492.

——— Sequel of a case of general paralysis of the insane at puberty. H. C. Bristowe. Brit. M. J., Lond., 1894, i, 1125.

——— Remarks upon twenty-eight cases of adult female general paralysis admitted to the Royal Edinburgh Asylum during the five years 1889 to 1893. F. A. Elkins. Lancet, Lond., 1894, i, 1495-1497.

——— De la paralysie générale chez la femme; étiologie et clinique. J. D. Idanow. Ann. méd.-psych., Par., 1894, 7 s., xix, 382-457.

——— Degenerative Muskelatrophie bei progressiver Paralyse. Neurol. Centralbl., Leipz., 1894, xiii, 610-616. A. Hoche.

——— Ueber Zunahme und Ursachen der progressiven Paralyse. R. von Krafft-Ebing. Internat. klin. Rundschau, Wien, 1894, viii, 1273-1279.

——— I. Réponse à l'observation de M. Henneguy relative au noircissement et à la conservation sous lamelles des coupes par les méthodes de Golgi à l'argent et au sublimé. II. Confirmation par la méthode de Cox des lésions cellulaires de l'écorce dans la paralysie générale. III. Aspect des cellules de Purkinje dans la paralysie générale. Compt. rend. Soc. de Biol. L. Azoulay. Par., 1894, 10 s., i, 419.

——— Les altérations des cellules de l'écorce cérébrale dans la paralysie générale, etudiées par la méthode de Golgi et Klippel. Azoulay. *Ibid.*, 405-407.

——— Paralysie générale; lésions et symptômes spinaux; formes spinales. Kippel. Arch. de méd. expér. et d'anat. path., Par., 1894, vi, 75-114.

——— Arthropathy in general paresis. J. H. Lloyd. Phila. Hosp. Rep., 1893, ii, 164-175.

——— Étude comparative des lésions médullaires dans la paralysie générale et dans le tabes. P. Marie. Gaz. d. hôp., Par., 1894, lxvii, 55-60.

——— A contribution to the morbid anatomy and pathology of the neuro-muscular changes in general paralysis of the insane. A. W. Campbell. J. Ment. Sc., Lond., 1894, xl, 177-195, 2 pl.

——— Des complications viscérales de la paralysie générale progressive. G. Durante. Gaz. d. hôp., Par., 1894, lxvii, 213, 241.

——— Des troubles trophiqueset des troubles circulatoires dans la paralysie générale. Gaz. hebd. de méd., Par., 1894, xli, 98, 111.

Goitre. Two cases of insanity with goitre treated with thyroid extract. T. S. McClaughry. J. Ment. Sc., Lond., 1894, xl, 635.

Hallucinations. Hallucinationerne. Biblioth. f. Laeger., Kjöbenh. K. Pontóppidan, 1893, 7 R., iv, 339-356.

——— O. omamach i zudzeniach [Hallucinations and illusions]. W. Kohlberger. Przegl. lek., Krakow, 1893, xxxii, 517, 529, 546, 555, 581, 591, 605, 618.

——— Contributo allo studio delle allucinazioni verbali psico-motrici. Manicomio mod., Nocera, 1893, ix, 51-122. A. Pieraccini.

——— Co-existences, associations et combinaisons hallucinatoires. J. Séglas. J. d. conn. méd. prat., Par., 1894, 121, 131, 140.

——— The genesis of hallucination, illusion, and delusion. H. A. Tomlinson. J. Nerv. and Ment. Dis., N.Y., 1894, xxi, 576-585.

Hallucinations. Hallucinations and delusions. W. M. McLaury. Alienist and Neurol., St. Louis, 1894, xv, 429-454.

——— Das Delirium hallucinatorium. E. Mendel. Berl. klin. Wchnschr., 1894, xxxi, 663-667.

——— Ueber unilaterale Hallucinationen. H. Higier. Wien. Klinik, 1894, xx, 139-170.

——— Lidt om Hallucinationer. H. Holm. Norsk. Mag. f. Laegeirdensk., Christiania, 1894, 4 R., ix, 433-454.

——— Considérations sur les hallucinations provoquées par la perte d'un sens, à propos d'un cas de délire complexe avec hallucinations multiples consécutif à la perte de la rue chez un dément sénile. France méd., Par., 1894, xli, 369, 386.

——— Sur un cas d'hallucinations motrices verbales chez une paralytique générale. P. Sérieux. Arch. de neurol., Par., 1894, xxvii, 321-352.

——— Les hallucinations et le de doublement de la personnalité dans la folie systématique; les persécutés possédés et la variété psycho-motrice du délire des persécutions systématique. Ann. méd.-psych., Par., 1894, 7 s., xx, 5-43.

——— Ueber die Trugwahrnehmung (Hallucination und Illusion) mit besonderer Berücksichtigung der internationalen Enquête über Wachhallucinationen bei Gesunden. Schrift. d. Gesellsch. f. psychol. Forschr. E. Parish, Leipz., 1893-4, ii, 49-228, 31.

Headache. De la céphalalgie dans les maladies mentales. A. Cullerre. Ann. méd.-psych., Par., 1894, 7 s., xx, 75-83.—Par., 1894, xxviii, 2-11.

Heart. Die Hypoplasie des Herzens bei Geistesschwachen. Wulff. Allg. Ztschr. f. Psychiat., &c., Berl., 1894, li, 447-457.

——— Heart lesions in mental diseases. H. D. Valin. Chicago Clin. Rev., 1893-4, iii, 323-348.

——— Ueber die anatomischen Veränderungen des Herzens bei chronischen Geistesstörungen; eine statische Untersuchung. C. Strecker. Arch. f. path. Anat., &c., Berl., 1894, cxxxvi, 217-244.

——— Ueber organische und functionelle Herzleiden bei Geisteskranken. München. med. Wchnschr., 1894, xli, 305, 328, 355. G. Reinhold.

Histology. Sur les altérations histologiques de l'écorce cérébrale dans quelques maladies mentales. R. Colella. Arch. ital. de biol., Turin, 1893-4, xx, 216-218.

Hyoscine. Hyoscinæ hydrobromas in a case of old-standing mania; extraordinary result of a single large dose. Balagopal. Indian M. Rec., Calcutta, 1894, vi, 143.

Hysteria. Hysteria. A. Mstislavski. Feldscher, St. Petersb., 1894, iv, 142-146.

——— On a case of hysterical alexia, cured by suggestion. B. A. Pope. N. Orl. M. and S. J., 1893-4, n. s., xxi, 814-816.

——— Automatisme ambulatoire de nature hystérique; présentation de malade. Régis. Mém. et bull. Soc. de méd. et chir de Bordeaux (1893), 1894, 31-48.

——— Afonia isterica. F. Rueda. [Transl.] Boll. d. mal. d. orecchio, d. gola ed. naso, Firenze, 1894, xii, 82-85.

——— Febbre isterica come equivalente termico dell' accesso. F. Santangelo Spoto. Gazz. d. osp., Milano, 1894, xv, 177-181.

——— Étiologie infectieuse de l'hystérie. Grasset. N. Montpel. méd., 1894, iii, 409, 431.

——— Ueber einen schweren Fall von Hysterie. J. Hackel. St. Petersb. med. Wchnschr., 1894, n. F., xi, 163-165; 1 pl.

——— Beitrag zur hysterischen Apoplexie. H. Higier. Wien. klin. Wchnschr., 1894, vii, 323, 347, 383.

——— Ueber hysterische Muskelatrophie. L. Hirt. Deutsche med. Wchnschr., Leipz. u. Berl., 1894, xx, 459.

Hysteria. Hysterie und ihr Einfluss auf die Malerei. F. Horn. Wien. klin. Wchnschr., 1894, vii, 295, 314.
——— Studio sopra un caso di spasmo della glottide da isterismo. S. Lumbau. Gazz. med. lomb., Milano, 1894, liii, 131, 141, 153.
——— Sur trois cas d'hystérie infantile. Bernheim. Rev. méd. de l'est., Nancy, 1894, xxvi, 313-316.
——— Gangraena cutis hysterica. F. Ehrl. Wien. klin. Wchnschr., 1894, vii, 330-333.
——— Simulation hystérique. J. Verhoogen. J. de méd., chir., et pharmacol., Brux., 1894, 38.
——— Contribution à l'étude des pseudoméningites hystériques (symptomatologie et diagnostic). Brugère. Bordeaux, 1893, 57 pp. 4to, No. 47*.
——— État mental des hystériques. Les accidents mentaux. Pierre Janet. Par., 1894, Rueff et Cie., 304 pp. 12mo.
——— Hysterie und Suggestion. Munchen. med. Wchnschr., 1894, xli, 117, 146. L. Löwenfeld.
——— Su due casi d'isteria maschile associata a pazzia morale. S. de Sanctis Policlin, Roma, 1893-4, i, 266-273.
——— Note sur la gangrène spontanée de la peau chez les hystériques. C. Féré. Compt.-rend. Soc. de Biol., Par., 1894, 10 s., i, 427-429.
——— Mutismo isterico guarito con l'eterizzazione. Progresso med. C. Gioffredi. Napoli, 1894, viii, 119-130.
——— Die Behandlung der Hysterie. E. Hecker. Therap. Monatsh., Berl., 1894, viii, 143, 206.
——— [Two cases of hysteria, simulating Parkinson's and Thomson's disease.] G. A. Kliatchkin. Med. Obozr., Mosk., 1894, xli, 275-282.
——— Does nystagmus exist in hysteria? J. Sabrazès. Med. Week, Par., 1894, ii, 409.
——— Un caso de histeria con temperatura de 105·8° F. J. Stafford, Rev. méd. quir. amer., N.Y., 1894-5, iii, 2.
——— Some notes on hysteria, with special reference to hysteria in the male, and its connection with specific organic disease of the nervous system. A. S. Walker. Edinb. M. J., 1894-5, xl, 312-322.
——— Beiträge zur Casuistik der Hysteria virilis. Carl Gergen. Wurzburg, 1893, J. Seelmeyr, 56 pp. 8vo.
——— [Hysteria in soldiers.] Vrach, St. Petersb., 1894, xv, 597, 624. M. B. Blumenau.
——— Hysteria and Neurasthenia. J. M. Clarke. Brain, Lond., 1894, xvii, 119-178.
——— Vomissement incoërcibles depuis 10 mois, chez une jeune fille de 14 ans; hystérie; guérison rapide des vomissements après suggestion hypnotique. Dumontpallier. Rev. de l'hypnot. et psychol. physiol., Par., 1894-5, ix, 21.
——— Surdi-mutité hystérique guérie par suggestion à l'état de veille. X. Francotte. Ann. Soc. méd.-chir. de Liége, 1894, xxxiii, 285-289.
——— [A curious case of hysteria in man]. T. Hondo mada I. Kokawa. Chugai Ijishimpo, Tokio, 1894, No. 331, 6; No. 332, 15; No. 333, 14.
——— Un cas de mutisme hystérique. Marotte. Province méd., Lyon, 1894, viii, 289-291.
——— Hysteria and neurasthenia. A. B. Richardson. Columbus M. J., 1894-5, xii, 131-137.
——— Contribution à l'étude de l'hystérie toxique (intoxication sulfo-carbonée). Charles Martel. Par., 1894, G. Steinheil. 60 pp. 8vo.
——— Des rapports de l'hystérie et de la folie. Ballet. [Rap.] Limousin méd., Limoges, 1894, xviii, 133-136.
——— The relation of hysteria to structural changes in the uterus and its adnexa. A.P. Clarke. Ann. Gynæc. and Pædiat., Phila., 1894-5, viii, 55-57.
——— [Hysteria in the Army; new case of, in a soldier]. B. S. Greidenberg. Vrach, St. Petersb., 1894, xv, 736-738.
——— Ueber Hysterie im Kindesalter. A. Hoffmann. Fünfz. Beitr. a. d. Geb. d. ges. Med. Festschr. . . . d. Ver. d. Aerzte d. Rgrngsbz. Düsseld., Wiesb., 1894, 182-189.

Hysteria. Isterrimo, lezioni cliniche. Samuele Gubitosi. Napolie, 1893, Valeris and Silvestri, 178 pp. 8vo.

——— A case of hysteria in a boy, characterised by regularly recurring attacks of lethargy; treatment by hynotism. T. Diller. Brain, Lond., 1893, xvi, 556-561.

——— Hysterical aphasia, hemianæsthesia, and dyschromatopsia. C. K. Mills. Phila. Hosp. Rep., 1893, ii, 148-151.

——— Pseudo-globus hystericus. P. J. Mink. Geneesk. Courant, Tiel 1893, lxvii, No. 48.

——— Neurosis in women; (hysteria). F. B. Robinson. Gaillard's M. J., N. Y., 1894, lviii, 103-108.

——— Hysteria. L. G. Smart. N. Albany M. Herald, 1893, xiii, 748-752.

——— Observations de mensonges ou prétendus mensonges des hystériques. C. Vibert. Ann. d' hyg., Par., 1894, 3 s., xxxi, 171-181.

——— A case of male hysteria characterised by recurrent attacks of motor aphasia and lethargy; apparent cure by hypnotism and suggestion. T. Diller. Internat. M. Mag., Phila., 1894-5, iii, 182-186.

——— Four weeks' starvation caused by hysteria; cured by a sight at the stomach pump. (Lincoln's Inn.) Jagganath. Indian M. Rec., Calcutta, 1894, vi, 176.

——— A case of hysteria. A. L. Knight. Cincin. Lancet-Clinic, 1894, n. s., xxxii, 513, [Discussion] 522.

——— Quatro casos de hysteria em homens. M. Nery. Brazil-med., Rio de Jan., 1894, 65-67.

——— Un cas de pseudo-éléphantiasis névropathique du membre supérieur chez une femme hystérique. G. Thibierge. Bull. et mém. Soc. méd. d. hôp. de Par., 1894, 3 s., xi; 262-268.

——— Observations de mensonges ou prétendus mensonges des hystériques. C. Vibert. Rev. de méd. lég., Par., 1893-4, i, 241-246.

——— Beitrag zur Casuistik der Hysterie. A. Bäumel. Wien. med. Presse, 1894, xxxv, 1010-1014.

——— L'état mental dans l'hystérie. P. Blocq. Gaz. d. hôp., Par., 1893, lxvi, 1273-1280.

——— Des tremblements hystériques. P. Delmar. J. de Méd. de Bordeaux, 1893, xxiii, 437, 470, 483, 491, 503, 517.

——— Associazione dell' isterismo coro lesioni organiche dell' arecchio. G. Gradenigo. Gazz. d. osp., Milano, 1893, xiv, 1218.

——— La théorie psychologique de l'hystérie (formale cortico cérébrale de cette névrose), revue générale. N. Grasset. Montpel. méd., 1893, iii, 866, 885.

——— Hysterical blue œdema. A. J. McCosh. Ann. Surg., Phila., 1893, xviii, 667.

——— Maskerede Hysterier oj hysteriske Masker. K. Pontoppidan. Hosp. Lid. Kjöbenh., 1893, 4 R., i, 741-750.

——— Da tremblement hystérique. Roger. Semaine méd., Par., 1893, xiii, 522. Also Trans. Med. Week, Par., 1893, i, 537.

——— Hysterical trembling, stammering, and mutism. J. C. Shaw. Internat. Clin., Phila., 1893, 3 s., iii, 118-123.

——— Storia clinica di au isterica, conpilegia traumaticoisterica; nevrosi cardiaca; accessi catalettici; grandi convulsioni; afonia; grave spasmo accessionale della glottide; considerazioni sulla cura fatta colla pilocarpina e colla suggestian. G. Spreza. Raccogliton med., Fœli, 1893, 5 S., xvi, 289-302.

——— Hysterical disturbances of the special senses. J. H. Thompson. Tr. M. Ass. Missouri, Jefferson City, 1893, 166-172.

——— Un caso de histerismo. R. del Valle q Aldabalde. Rev. de med. q cirug. pract., Madrid, 1893, xxxiii, 281-286.

——— Isterismo e sentimento. Giuseppe Cattani. Milano, 1894: L. Omodei Zorini, 369 pp. 12mo.

——— Un caso de histerismo en un joven de diecinueve años. P. Peñarredonda y Barrio. Siglo méd., Madrid, 1894, xli, 517.

——— L'hystérie paludéenne. H. Bidon. Marseille méd., 1894, xxxi, 513-536.

——— Vomissements, incoercibles chez une hystérique de 14 ans, guérison par suggestion. Dumontpallier. Courrier méd., Par., 1894, xliv, 244.

Hysteria. Note sur l'oligodactylie cubitale chez les hystériques. C. Féré et J. Roger. Compt. rend. Soc. de Biol., Par., 1894, 10 s., i, 619-621.
——— Toux nerveuse; coxalgie hystérique; anorexie; contractures multiples; troubles psychiques chez une jeune fille. Buzancaes de Guesdron. J. de clin. et de thérap. inf., Par., 1894, ii, 752-754.
——— Case of hysteria in a child, with remarkable psychical symptoms. H. G. Langwill. Edin. Hosp. Rep., 1894, ii, 426-429.
——— Sur un cas d'hystérie à forme particulière. R. Lépine. Rev. de méd., Par., 1894, xiv, 713-728.
——— Un cas de mutisme hystérique. M. Natier. Ann. de la Policlin. de Par., 1894, iv, 256-262.
——— Disharmony between pulsation and impulse of the heart in morbid stages of hysteria. F. Sornstein. Medycyna, Warszawa, 1893, xxi, 962-964.
——— L'hystérie à Toulon, vers 1730. H. Bidow. Marseille méd., 1893, xxx, 521, 537, 567, 577, 616.
——— Some notes on hysteria, with special reference to hysteria in the male and its connection with specific organic disease of the nervous system. A. S. Walker. Edinb. M. J., 1894-5, xl, 312-322.
——— The gravity of hysteria. G. Eliot. N. York M. J., 1894, lx, 390-392.
——— Ueber einige Symptome der Hysterie und über die Beziehungen der Hysterie zum Alkoholismus. Ganser. Jahresb. d. Gesellsch. f. Nat. u. Heilk. in Dresd., 1893-4, 119-133, [Discussion] 79-83.
——— L'hystérie dans l'art antique; étude médicale sur quelques monuments figurés de l'antiquité. H. Meige. Internat. med. phot. Monatschr., Leipz.; 1894, i, 137, 167.
——— Zur Pathologie des hysterischen Stotterns. E. Remak. Berl. klin. Wchnschr., 1894, xxxi, 795-797.
——— Grande isteria con crisi convulsive; contratture, sordità, cecità; dolori all' ovaia; guarigione coll' ipnotismo. E. Terrien. Ipnotismo, Firenze, 1894, v, 163.
——— Des éruptions cutanées chez les hystériques. Adolphe Gauthier. Lyon, 1893, 69 pp. 4to, No. 801.
——— Hysterical conditions, with clinical history of a case. A. Halliday, Maritime M. News, Halifax, 1894, vi, 211-214.
——— A further study of hysterical cases and their fields of vision. J. K. Mitchell. J. Nerv. and Ment. Dis., N.Y., 1894, xxi, 1-49.
——— Des fausses paraplégies chez les garçons hystériques. J. Simon. Bull. méd., Par., 1893, vii, 1131-1133; also Progrès méd., Par., 1894, 2 s., xix, 1-4.
——— De l'hystérie en Vendée. Terrien. Arch. de neurol., Par., 1893, xxvi, 447-475.
——— Strange hysterical fits in a young man. J. Benjamin. Indian M. Rec., Calcutta, 1894, vi, 144.
——— Hypnotismus und Hysterie: eine Erwiderung. München. med. Wchnschr. F. Jolly. 1894, xli, 247.
——— Spasmo clonico dei retti addominali d' indole isterica. T. Legnani. Arch. Ital. di clin. med., Milano, 1893, xxxii, 566.
——— Hysterie mit Schmerz- und Krampfanfällen bei einem 12 jährigen Mädchen. Heilung-Mader. Wien. med. Bl., 1894, xvii, 101.
——— Ein Fall von hysterischen Mutismus. G. Ringier. Ztschr. f. Hypnot., &c., Berl., 1893-4, ii, 143-150.
Hystero-epilepsy. Report of a case of hystero-epilepsy cured by operative interference. L. A. Malone. Tri-State M.J., Keokuk, 1893-4, i, 201-204.
——— A case of hystero-epilepsy in a man. J. B. Thornton. Boston M. and S. J., 1894, cxxxi, 416.
——— Di una rara forma di impulsione-ambulatoria in istero-epilettico per traumatismo. G. Antonini. Riv. sper. di freniat., Reggio-Emilia, 1894, xx, pt. 2, 193-203.
——— Die Hysteria nach den Lehren der Salpêtrière. Mit einem Vorwort von J. M. Charcot. Autoriserte deutsche Ausgabe von Dr. Karl Grube. Normale oder interparoxysmale Hysterie. Gilles de la Tourette. Leipz. und Wien, 1894, F. Deuticke, 342 pp., 8vo.

Hysteria. Der Geisteszustand der Hysterischen (Die psychischen Stigmata). Mit eines Vorrede von Professor Charcot. Uebersetzt von Dr. Max Kahane. Pierre Janet. Leipz. und Wien, 1894, F. Deuticke, 197 pp. 8vo.

——— A hyoscin hatása a hysteroepilepsiás roham ellen. [Action of hyoscin in hystero-epileptic attack.] Orvosi hetil., Budapest, 1893, xxxvii, 484, 498, 513, 524. Also, transl. [Abstr.]. Pest. med.-chir. Presse, Budapest, 1894, xxx, 172; 197. N. Béla.

——— Report of a case of hystero-epilepsy. I. J. Bush. Texas Cour.-Rec. Med., Dallas, 1893-4, xi, 191-193.

——— Sluch. reflektor. hystero-epilepsiæ. S. N. Koneff. Med. besieda, Voronej, 1894, viii, 321-326.

——— Istero-epilessia da Influenza. N. Musmeci. Riv. clin. e terap., Napoli, 1894, xvi, 402-408.

Idiocy. Zur Aetiologie der Idiotie. Mit einem Vorwort von Dr. W. Sander. Hermann Piper. Berl., 1893, Fischer, 207 pp. 8vo.

——— Du traitement chirurgical et du traitement médico-pédagogique de l'idiotie. Bourneville. Cong. ann. de méd. ment., C.-r., 1892, Blois, 1893, iii, 261-303.

——— Types of idiocy and imbecility. F. Beach. Clin. J., Lond., 1894, iv, 43-46.

——— L'idiotie et l'imbécillité au point de vue nosographique. P. Sollier. Arch. de neurol., Par., 1894, xxvii, 33-38.

——— Le forme dell' idiotismo. E. Morselli. Anomalo, Napoli, 1893, v, 5-11.

——— Limitations in the treatment of the idiot. B. Jones. Am. J. Surg. and Gynec., Kansas City, 1893-4, iv, 240-243.

——— (A) Discussion on points connected with the education of feeble-minded children. Brit. M. J., Lond., 1894, ii, 528-531.

——— Conformation des organes génitaux chez les idiots et les imbéciles. J. Voisin. Ann. d'hyg., Par., 1894, 3 s., xxxi, 525-532. Périodes régulières d'excitation maniaque et de dépression mélancolique chez une idiote de huit ans. Bull. méd., Par., 1894, viii, 505-507.

——— Cas d'idiotie symptomatique d'une atrophie de l'hémisphère gauche (lobes parietaux et occipitaux). Homery. Ann. méd.-psych., Par., 1893, 7 s., xviii, 428-431.

——— Considérations sommaires sur le traitement médico-pédagogique de l'idiotie. Bourneville. Méd. inf., Par., 1894, i, 16-38.

——— Two interesting cases of idiocy. 1. Idiocy with spastic and athetoid phenomena. 2. Rachitic idiocy. W. Sinkler. Phila. Hosp. Rep., 1893, ii, 161-163.

——— [Syphilitic spinal paralysis in connection with imbecility.] A. Popoff. Russk. Med., St. Petersb., 1893, xviii, 735, 755, 775.

——— Some clinical aspects of imbecility. S. J. Fort. Maryland M. J., Balt., 1894, xxxi, 123-127.

Imperative ideas. D. H. Tuke. Brain, Lond., 1894, xvii, 179-197.

——— Zur Theorie der Zwangsvorstellungen. Allg. Ztschr. f. Psychiat., &c., Berl., 1893-4, l, 1063-1074.

Infectious processes. The relations of infectious processes to mental disease. C. K. Mills. Am. J. M. Sc., Phila., 1894, n. s., cviii, 503-517.

Insanity. Ueber das inducirte Irresein (Folie communiquée). M. Schönfeldt. Arch. f. Psychiat., Berl., 1894, xxvi, 202-266.

——— La folie post-opératoire. Jacobs. Presse méd. belg., Brux., 1894, xlvi, 233.

——— Prophecy and insanity. J. Weir, jun. Am. Pract. and News, Louisville, 1894, xviii, 99-106.

——— The increase of insanity in Virginia, and practical suggestions for the care and maintenance of insane people by the State. J. S. Apperson. Virginia M. Month, Richmond, 1894-5, xxi, 301-318.

——— The history of an experiment in dealing with the reported cases of insanity occurring in the Barony Parish of Glasgow. J. Carswell. J. Ment. Sc., Lond., 1894, xl, 394-404.

Insanity. Diagnostik der Geisteskrankheiten für praktische Aerzte und Studirende, Wien und Leipz., 1894, Urban und Schwarzenberg. Robert Somner. 310 pp. 8vo.

——— Folie consécutive à une ovarosalpingectomie double; présentation de malade. Mém. et bull. Soc. de méd. et chir. de Bordeaux (1893), 1894, 279-291. Régis.

——— Sul peso specifico dell' orina nelle malattie mentali. U. Stefani. Riv. sper. di freniat., Reggi-Emilia, 1894, xx, 1-7, 1 ch.

——— Problems of public interest concerning the insane. Opheus Everts. Read before the Mississippi Valley Medical Association, Oct. 4, 1893. Cincin., 1893, R. Clarke and Co., 11 pp. 8vo.

——— Excessive mental excitement, and some of its consequences. T. R. Glynn. Liverpool M.-Chir. J., 1894, xiv, 1-21.

——— [The crimes of the insane from excessive nervous irritation.] V. N. Ergolski. Arch. psichiat., &c., Charkov, 1894, xxiii, 60-68.

——— De l'hypothermie chez les aliénés. J. B. Bouchaud. Ann. méd.-psych., Par., 1894, 7 s., xix, 194-265, 4 ch.

——— Sulle cause della odierna anarchia psichica e compito dell' igiene morale di combatterle. Lauderer. Riv. internaz. d' ig., Napoli, 1894, v, 145-160.

——— I tremori nei pazzi. A. Cristiani. Riv. sper. di freniat., Reggio-Emilia, 1894, xx, 17-22, 1 ch.

——— On the means of preventing and evading insanity. W. W. Ireland. Alienist and Neurol., St. Louis, 1894, xv, 181-208.

——— Les folies des maladies aigües. et Chevalier-Lavaure Regis. Gaz. hebd. de méd., Par., 1893, xl, 457, 471, 484.

——— De la folie par commotion cérébrale et de ses rapports avec la législation militaire. A. Rigal. Ann. d'hyg., Par., 1894, 3 s., xxxi, 204, 340.

——— Report of fifty-seven cases of insanity occurring in six years among silk-mill employées in a manufacturing city in New Jersey. W. P. Spratling. N. York M. J., 1894, lix, 614-616.

——— Ueber Beziehung moderner Zeitströmungen zum Irrsinn. Blaustern. Deutsche Rev., Stuttg., 1894, 256-258.

——— Ueber die Formen von Geistesstörung, welche Hexenprocesse veranlasst haben. O. Snell. Allg. Ztschr. f. Psychiat., &c., Berl., 1893-4, l, 534-545.

——— Ueber inducirtes Irresein und über einzelne inducirte und ähnliche Erscheinungen bei Geisteskranken. Roller. Allg. Ztschr. f. Psychiat., &c., 1893-4, l, 722-739.

——— The institutional care of the insane. E. P. Christian. Physician and Surg., Detroit and Ann Arbor, 1894, xvi, 208-215.

——— Morison lectures on insanity. J. B. Tuke. Edinb. M. J., 1893-4, xxxix, 673, 769, 890, 983, 1090, 1103, 1 pl.

——— The physical basis of insanity and the insane diathesis. W. A. White. Am. J. Insan., Utica, N. Y., 1893-4, l, 530-537.

——— Ueber die Gewebsveränderungen der Nervenzellen in der Hirnrinde bei Geisteskrankheiten. B. Nagy. Ungar. Arch. f. Med., Wiesb., 1894, iii, 17-37, 1 pl.

——— Calvarium from a case of circular insanity. L. R. Oswald. Glasgow M. J., 1894, xlii, 61-63.

——— On three cases of recovery after a lengthened duration of insanity, with remarks. J. A. Campbell. J. Insan., Utica, N. Y., 1893-4, l, 505-511.

——— The commitment, detention, care, and treatment of the insane in America. G. A. Blumer. Am. J. Insan., Utica, N. Y., 1893-4, l, 538-556.

——— The insane kings of the Bible. D. R. Burrell. Am. J. Insan., Utica, N. Y., 1893-4, l, 493-504.

——— Le problème de l'assistance des aliénés. E. Toulouse. Gaz. d. hôp., Par., 1894, lxvii, 177, 199.

——— On the early stages of acute insanity. T. C. Shaw. St. Barth. Hosp. Rep., Lond., 1893, xxix, 109-123.

——— The inadequacy of the morbid changes found post mortem to explain the manifestations of insanity. H. A. Tomlinson. Univ. M. Mag., Phila., 1893-4, vi, 657-672.

Insanity. The factors of insanities. J. H. Jackson. Med. Press and Circ., Lond., 1894, n. s., lvii, 615-619.

——— Des conditions de la contagion mentale morbide. Marandon de Montyel, Ann. méd.-psych., Par., 1894, 7 s., xix, 266, 466. Impulsions homicides consécutives à la lecture d'un roman passionel chez un dégénéré. *Ibid.*, 458-466.

——— [On morality of the insane.] J. P. Merjeevski. Vestnik klin. i sudebnoi psichiat i nevropatol., St. Petersb., 1893, x, pt. 1, 208; 1894, x, pt. 2 130.

——— Bijdrage tot de pathogenese der zoogenaamde primaire verwardheid. van Deventer. Psychiat. Bl., Amst., 1893, xi, 166-186.

——— Zur Lehre von den Geistesstörungen der Entarteten. Allg. Ztschr. f. Psychiat., &c. O. Dornblüth. Berl., 1893-4, l, 681-689.

——— Prevention of insanity. G. H. Hill. Kansas M. J., Topeka, 1894, vi, 597-607.

——— Frequent disorder of pneumogastric functions in insanity. T. H. Kellogg. Am. J. Insan., Chicago, 1894-5, li, 196-204.

——— Ueber Querulantenwahnsinn. Ztschr. f. Med.-Beamte, Berl., 1894, vii, 324-327.

——— Ueber psychische Schwäche in ihren verschiedenen Formen. Moeli. Preuss. Med.-Beamten-Ver. Off. Ber., Berl., 1894, xi, 136-148.

——— La folie chez l'enfant. P. Bézy. Méd. inf., Par., 1894, i, 75-84.

——— Cases of insanity. H. Blake. Med. Press and Circ., Lond., 1894, n. s., lviii, 209.

——— The prevention of insanity. G. F. Blandford. Brit. M. J., Lond., 1894, ii, 256-260.

——— Note sur deux cas de lésions organiques du cœur chez des aliénés. Ann. med.-psych., Christian. Par., 1894, 7 s., xix, 111-113.

——— The association of visceral disease with insanity. H. A. Tomlinson. North-west Lancet, St. Paul, 1893, xiii, 441-446.

——— Ueber einige Fälle von geistiger Erkrankung im Militärdienste. Cor.-Bl. f. schweiz. Aerzte. W. v. Speyr. Basel, 1893, xxiii, 752-761.

——— Ein Fall von sanguinischer Minderwerthigkeit. J. van Deventer. Allg. Ztschr. f. Psychiat., &c., Berl., 1894, li, 550-578.

——— The alleged increase of insanity. H. Rayner. Brit. M. J., Lond., 1893, ii, 1161-1163.

——— The insane disorders of childhood. J. M. Taylor. Arch. Pediat., N.Y., 1894, xi, 100-115.

——— Insanity in children. Alienist and Neurol. C. B. Harriet Alexander. St. Louis, 1893, xiv, 409; 1894, xv, 27. Also, Woman's M. J., Toledo, 1894, ii, 43, 59.

——— A case of insanity consecutive to ovaro-salpingectomy. E. Regis. Am. J. Insan., Utica, N. Y., 1893-4, l, 345-353.

——— Insanities characterised by dominant concepts; with presentation of cases of an unused form. A. McL. Hamilton. Med. News, Phila., 1894, lxiv, 57-60.

——— De la méthode anatomo-clinique en médecine mentale. A. Joffroy. Progrès méd., Par., 1893, 2 s., xviii, 413-418.

——— Ostéoarthropathie aiguë chez une aliénée, N. iconog. de la Salpêtrière, 1893, vi, 322-332. Potovski.

——— Der seelisch Belastete und seine ärztliche Ueberwachung. A. Leppmann. Berl. Klinik., 1893, Heft 66, 1-24.

——— De la contagion de la folie. De Boeck. Bull. Soc. de Méd. ment. de Belg., Gand et Leipz., 1893, 416-437.

——— Geisteskranke Brandstifter mit angezweifelter Zurechnungsfahigkeit. R. Schroeter. *Ibid.*, 41-51.

——— Fall von Denunciantenwahn. Hennemeyer. Vrtljschr. f. gerichtl. Med., Berl., 1894, 3 F., viii, 305-310.

——— Welche Fälle von Psychosen eignen sich für offene Anstalten? J. Bartels. Deutsche Med. Ztg., Berl., 1894, xv, 777.

——— Statistisches und Klinisches zur Kenntniss der paralytischen Geistesstörung beim weiblichen Geschlecht. R. Wollenberg. Arch. f. Psychiat., Berl., 1894, xxvi, 427-533.

Insanity. Provisional treatment of insanity. S. Brown. Med. Rec. N. Y., 1894, xlvi, 299.

——— O tratamento da raiva em Portugal pelo methodo Pasteur (anno de 1893). Bettencourt A. e Pestana Camara. Rev. de med. e cirurg., Lisb., 1894, ii, 81-96, 3 ch., 1 map.

——— Le ernie ed il loro significato antropologico negli alienati di mente. A. Cristiani. Arch. di psichiat., &c., Torino, 1894, xv, 401-407.

——— Hints towards the prevention of mental disorders. Curwen. J. Ment. Sc., Lond., 1894, xl, 585-591.

——— Criterion of insanity. Brainerd. South Calif. Pract., Los Angeles, 1893, viii, 435-438.

——— Insanity: its relation to the public and the profession. R. J. Preston. Virginia M. Month., Richmond, 1893-4, xx, 771-780.

——— A few cases of mild mental disturbance. L. W. Baker. Boston M. and S. J., 1893, cxxix, 537-539.

——— La folie à deux. J. de méd., chir., et pharmacol., Brux., 1893, 986-988.

——— Le patronage familial des aliénés en France. C. Féré. Rev. scient., Par., 1894, 4 s., ii, 235-240.

——— Den moralsk afsindige og den fodte Forbrydet. C. Geill. [Moral insanity and congenital transmission.] Ugesk. f. Laeger, Kjobenh., 1894, 5 R., i, 573, 597.

——— Prevention of insanity. G. H. Hill. Bull. Am. Acad. M., Easton, Pa., 1894, 617-625.

——— Figure sociali, artistiche, e dementi. S. Venturi. Rassegna clin. e statist. d. Villa di Salute di Palermo, 1892, ii, 119, 1893; iii, 21, 95.

——— Some mental disorders of childhood and youth. H. M. Hurd. Boston M. and S. J., 1894, cxxxi, 281-285.

——— Des délires systématisés dans les diverses psychoses. Magnan. Arch. de neurol., Par., 1894, xxviii, 273-284.

——— Mania transitoria, or temporary insanity. E. C. Mann. Maryland M. J., Balt., 1894-5, xxiii, 59-62.

——— Die Geisteskranken in dem Entwurf des bürgerlichen Gesetzbuches für das Deutsche Reich nach der zweiten Lesung desselben. Vrtljschr. f. gerichtl. med., Berl., 1894, 3 F., viii, 276-285.

——— [Causes and prevention of insanity.] J. A. Botkin. Moskva, 1894, D. A. Boutch-Bruevitch. 31 pp. 8vo.

——— [Insanity of contention.] Kvaerulant-Forrykthed; folie à trois. K. Pontoppidan. Hosp.-Tid., Kjobenh., 1894, 4 R., ii, 325-341

——— [Casual and anticipated insanity.] J. A. Botkin. Moskva, 1894, 31 pp. 8vo.

——— Das englische Irrenwesen. Jacobson. Ztschr. f. Med.-Beamte, Berl., 1894, vii, 341, 365.

——— The insane in workhouses. M. J. Nolan. J. Ment. Sc., Lond., 1894, xl, 621-629.

——— Progress in the care and treatment of the insane during the half-century. E. Cowles. Am. J. Insan., Chicago, 1894-5, li, 10-22.

——— Confusional insanity. W. L. Worcester. Am. J. Insan., Chicago, 1894-5, li, 71-77.

——— Discussion on the prevention of insanity. B. M. J., Lond., 1894, ii, 519-522.

——— Du délire des négations, sa valeur diagnostique et pronostique. Cong. ann. de méd. ment., C.-r., Camuset, 1892; Blois, 1893, iii, 3-38.

——— Influenza dei morbi accidentali nel decorso della pazzia. R. Canger. Manicomio mod., Nocera, 1893, ix, 339-347.

——— Note sur une forme distincte de maladie mentale aiguë, la confusion mentale primitive. Cong. ann. de méd. ment., Chaslin, C.-r., 1892; Blois, 1893, iii, 323-332.

——— La valeur des signes de dégénérescence dans l'étude des maladies mentales. Ann. méd.-psych., Par., 1894, 7 s., xx, 250-261.

——— Popular errors concerning insanity. R. M. Phelps. Med. News, Phila., 1894, lxv, 563-567.

——— Insanity of persecution. R. Semelaigne. J. Ment. Sc., Lond., 1894, xl, 500-518.

Insanity. Ueber frühzeitige Symptome geistiger Störungen; ein Beitrag zum Erkennen und Behandeln von Psychosen. C. Werner. Berl. klin. Wchnschr., 1894, xxxi, 513-515.
——— In relation to the increase of insanity. H. P. Stearns. Yale M. J., N. Haven, 1894-5, vii, 15-23.
——— [Time of association of insane in health and disease.] V. F. Tschish. Nevrol. Vestnik, Kazan, 1894, ii, 95-116.
——— I discoursi dei pazzi, Manicomio mod., Nocera. S. Venturi. 1893, ix, 205-310.
——— Des aliénés criminels ayant les apparences de raison. Rouby. Arch. d'anthrop. crim., Lyon et Par., 1894, ix, 338, 473.
——— Are there degrees of insanity? R. M. Phelps. North-west. Lancet, St. Paul, 1894, xiv, 284-288.
——— [Mania and melancholy of old age.] J. J. Trutovski. Arch. psichiat., &c., Charkov, 1894, xxiii, 53-82.
——— La folie diathésique. Crocq fils. Gaz. hebd. de méd., Paris, 1894, xli, 304, 315, 339, 351.
——— Present hospital care of the insane. S. B. Lyon. J. Nerv. and Ment. Dis., N.Y., 1894, xxi, 504-511.
——— La scialorrea negli alienati. A. Cristiani. Riv. sper. di freniat., Reggio-Emilia, 1894, xx, pt. 2, 117-141.
——— A comparative study of early life conditions in 200 cases each of sane and insane persons. R. Dewey. Tr. Illinois M. Soc., Chicago, 1894, xliv, 307-319.
——— De la folie parasyphilitique. Louis Hagelstein. Nancy, 1894, 55 pp., 4to, No. 20*.
——— The insanity of over-exertion of the brain; being the Morison lectures delivered before the Royal College of Physicians of Edinburgh, Session 1894. J. Batty Tuke. Edinburgh, 1894, Oliver and Boyd., 74 pp., 3 pl., 8vo, 6 s.
——— Contribution à l'étude de la folie héréditaire; folies concomitantes. Louis Pain. Nancy, 1894, 55 pp., 4to, No. 11*.
Ireland. On the alleged increase of insanity in Ireland. T. Drapes. J. Ment. Sc., Lond., 1894, xl, 519-548.
——— Increase of insanity in Ireland. D. H. Tuke. J. Ment. Sc., Lond., 1894, xl, 549-561.
Laughter. Spasmodic laughter and weeping. E. Brissaud. Chicago M. Recorder, 1894, vii, 155-167.
——— The irresistible or forced laugh in paralysis of the brain. V. M. Bechtereff. Nevrol. Vestnik, Kasan, 1893, i, pt. 3, 1-32, 1 pl.
——— Le rire et le pleurer spasmodiques. E. Brissaud. Rev. scient., Par., 1894, 4 s., i, 38-46.
Lombroso. Das letzte Capitel des Lombroso'schen Buches "Der geniale Mensch" nebst den Ergebnissen eigener Untersuchungen. Med.-Bl. d. württemb. ärztl. Ver., Stuttg., 1894, lxiv, 41, 49, 65, 83, 91, 97.
Lourdes. "Lourdes," by Emile Zola, from a medical point of view. Jane B. Henderson. *Ibid.*, 269-273.
Lunatic Asylums. Die familiale Verpflegung Geisteskranker (System der Irren-Colonie Gheel) der Irren-Anstalt der Stadt Berlin zu Dalldorf in den Jahren 1685, bis 1893. A. Bothe, Berl., 1893, J. Springer. 162 pp. 8vo.
——— Lunatic Asylums, their organisation and management. Charles Mercier. Lond., 1894, C. Griffin and Co. 315 pp. 8vo.
Lunatics. Ueber Fortschritte in der Irrenpflege. Frederich Scholz. Leipz., 1894, E. H. Mayer, 63 pp. 8vo.
——— Lunatics in public places. W. J. Herriman. Tr. M. Soc. N.Y., Albany, 1894, 337-340.
Mania. An epidemic of religious mania originating from a case of spurious pregnancy. J. G. Havelock. Edin. M. J., 1894-5, xl, 261-263.
——— Delusional mania following injury; progressive mania. J. W. Springthorpe. Austral. M. J., Melbourne, 1893, n. s., xv, 527-529.
——— Acute delirious mania. G. W. McIntyre. North-west. Lancet, St. Paul, 1893, xiii, 467-469.

Masked epilepsy. A. B. Shaw. Tr. M. Ass. Missouri, Jefferson City, 1893, 173-183.
Medico-legal. La médecine légale du dégénéré. Legrain. Arch. de l'anthrop. crim., Par., 1894, ix, 1-26.
Medico-psychological. A half-century of American medico-psychological literature. G. A. Blumer. Am. J. Insan., Chicago, 1894-5, li, 40-50.
Melancholia. The treatment of melancholia. S. Douglas. Post-Graduate, N.Y., 1894, ix, 424-428.
——— Melancholia; with the history of a case. D. W. Hasson. South Calif. Pract., Los Angeles, 1894, ix, 41-47.
——— Synopsis of post-mortem examinations in 104 cases of melancholia. J. W. Blackburn. Rep. Gov. Hosp. Insane, Wash., 1882-3, 63-112.
——— Recherches cliniques sur de délire de négation dans la mélancolie. Charles Vauriot. Nancy, 1894, 65 pp., 4to, No. 18*.
——— De la mélancolie sans délire. J. Séglas. Bull. méd., Par., 1894, viii, 351-353.
——— On melancholia; an analysis of 730 consecutive cases. W. F. Farquharson. J. Ment. Sc., Lond., 1894, xl, 11, 196.
——— Un cas de mélancolie anxieuse avec idées de négation et altération de la personnalité. Pichenot. Cong. ann. de méd. ment., C.-r., 1892, Blois, 1893, iii, 101-131.
——— États mélancoliques et urticaire: contribution à l'étude des auto-intoxications dans les maladies mentales. L. Déricq. Ann. de la Policlin. de Par., 1894, iv, 122-130.
Mental medicine. Le rôle de la médecine mentale; ce qu'il est, ce qu'il doit être. X. Francotte. Gaz. méd. de Liège, 1894-5, vii, 25, 27.
Morals. Un caso di pazzia morale. G. Dotto. Pisani, Palermo, 1893, xiv, 81-90, 1 pl.
——— Pazzo morale libidinoso. Arch. di psichiat., &c. E. Florian. Torino, 1893, xiv, 573.
Musical faculty. On affections of the musical faculty in cerebral diseases. W. W. Ireland. J. Ment. Sc., Lond., 1894, xl, 354-367.
——— Music and the musical faculty in insanity. R. Legge. J. Ment. Sc., Lond., 1894, xl, 368-375.
Nursing. Nursing of the Insane. Miss M. E. May. Hosp., Dispens., and Nursing, Internat. Cong. Char. [&c.], 1893, Balt.; Lond., 1894, 596-601.
——— The future supply and status of the nursing staff in asylums. W. F. Menzies. *Ibid.*, 376-385.
Obsession. Des obsédés anxieux sans tare névropathique héréditaire ou acquise, tout au moins pendant le jeune âge. Ann méd.-psych., Par., 1894, 7 s., xix, 306-313.
——— L'obsession du meurtre. Ladame. [Rap.] Actes Cong. internat. d'Anthrop. crim. 1892, Brux., 1893, iii, 41-55, [Discussion] 211-220.
——— L'obsession criminelle morbide. Magnan. [Rap.] Actes Cong. internat. d'Anthrop. crim., 1892, Brux., 1893, iii, 153-162, [Discussion] 211-220.
Othæmatoma. Observations upon the pathology of othæmatoma. E. Goodall. J. Ment. Sc., Lond., 1894, xl, 636-638.
Palate. Il "torus palatinus" nei pazzi. G. C. Ferrari. Riv. sper. di freniat., Reggio-Emilia, 1893, xix, 641-649.
Paranoia. Paranoia, or delusional insanity. Internat. Clin., Phila., 1894, 4 s., ii, 108-118. M. A. Starr.
——— Abgrenzung und Differenzial-Diagnose der Paranoia. A. Cramer. Allg. Ztschr. f. Psychiat, &c., Berl., 1894, li, 286-369.
——— Ueber Begrezung und Eintheilung der Paranoia. Boedeker und Cramer. Allg. Ztschr. f. Psychiat., &c., Berl., 1894, li, 178-205.
——— Reo per paranoia sessuale. C. Poggi. Arch. di psichiat., &c., Torino, 1894, xv, 111.
——— Paranoia primitiva cronica (casuistica). Gior. med. d. r. esercito, &c. L. Cognetti. Roma, 1894, xlii, 158-175.
——— An inchoative paranoiac. M. W. Barr. J. Nerv. and Ment. Dis., N.Y., 1894, xxi, 641-650.

Paranoia. Ueber das Verhalten des Krankheitsbewusstseins bei der Paranoia. A. Mercklin. Allg. Ztschr. f. Psychiat., &c., Berl., 1894, li, 579-589.

——— La degenerazione nello stile dei paranoici erotici. Riv. sper. di freniat., Reggio-Emilia, 1893, xix, 329-363. G. C. Ferrari.

Pathological anatomy. Ueber die organischen Veränderungen der Nervenzellen der Hirnrinde bei Geisteskrankheiten. B. Nagy. Pest. med.-chir. Presse, Budapest, 1894, xxx, 391. *Transl.* [Abstr.] *from* Magyar orviosi arch., 1894, Heft 1.

——— Beitrag zur Kenntniss der pathologischen Anatomie der Idiotie. N. M. Popoff. Arch. f. Psychiat., Berl., 1893, xxv, 637-662, 1 pl.

——— Le alterazioni anatomo-patologiche e morfologiche della pazzia. A. Raggi. Bull. d. sc. med. di Bologna, 1893, 7 s., iv, 605, 694.

——— Anatomische Studien an Gehirnen Geisteskranker. H. Schlöss. Jahrb. f. Psychiat., Leipz. u. Wien, 1893-4, xii, 157-337, 6 pls.

——— J. Middlemass and W. F. Robertson. On the typical microscopic lesions found in the brain in insanity. T. S. Clouston. J. Ment. Sc., Lond., 1894, xl, 665-670.

——— The morbid changes in the cerebro-spinal nervous system of the aged insane. A. W. Campbell. J. Ment. Sc., Lond., 1894, xl, 638-649.

Pathology. The pathology of epilepsy. E. C. Reyer. Indiana M. J., Indianap., 1893-4, xii, 372-375.

——— On some of the newer aspects of the pathology of insanity. W. L. Andriezen. J. Ment. Sc., Lond., 1894, xl, 673-684.

Pellagra. La pazzia e la pellagra nella provincia di Treviso. Gregorio Gregori. Treviso, 1893, L. Zoppelli, 79 pp., 8vo.

Persecution. Persécutés auto-accusateurs et persécutés possédés. J. Séglas. Arch. de neurol., Par., 1893, xxvi, 433-447.

——— Hemp drugs and insanity. J. H. T. Walsh. J. Ment. Sc., Lond., 1894, xl, 21-36.

Personality. [Elements of personality.] V. Tschish. Vestnik klin. i sudebnoi psichiat. i nevropatol., St. Petersb., 1893, x, pt. 1, 145; 1894, x, pt. 2.

Poë. Edgard Poë: étude de psychologie morbide. P. Moreau. Ann. méd.-psych., Par., 1894, 7 s., xix, 5-26.

Poetry. Die Dichtkunst bei Geisteskranken in ihren Beziehungen zu der Frage "Genie und Irresein." Binder. Med. Cor.-Bl. d. württemb. ärztl. Ver., Stuttg., 1893, lxiii, 217, 225, 233, 241, 249.

Psychiatry. Psychiatrie für Aerzte und Studirende bearbeitet. Th. Ziehen. Berl., 1894, F. Wreden. 479 pp., 5 pls., 8vo.

——— Die neue psychiatrische Klinik der Universität Würzburg. Rieger. Klin. Jahrb., Berl., 1894, v, 145-156, 1 pl.

——— L' insegnamento clinico della psichiatria: prelezione al corso di clinica psichiatrica. C. Bonfigli. Gazz. med. di Roma, 1893, xix, 569-590.

——— Psykiatriske Studier. H. Dedichen. Forh. Norske med. Selsk. i Kristiania, 1894, 18-35.

——— [Problems and influence of psychiatry upon general science and upon life.] N. M. Popoff. Kazan, 1894, 22 pp. 8vo.

——— 1. Psychiatrie und Seelsorge. Referenten: Siemens und Zinn senior 2. Zur Reform des Irrenwesens in Preussen und des Verfahrens in Entmündigungssachen wegen Geisteskrankheit Referenten: Zinn senior und Pelman. Verein, München, 1893, J. F. Lehmann, 115 pp. 8vo.

——— De beteekenis van het onderwijs in de psychiatrie voor de geneeskunde. C. Winkler. Utrecht, 1893, J. L. Beijers, 37 pp. 8vo.

——— Instruction in psychiatry in American medical colleges. N. E. Paine. Am. J. Insanity, Utica, N. Y., 1893-4, l, 372-380.

——— Gedenktage der Psychiatrie und ihrer Hülfsdisciplinen in allen Ländern. Laehr (Heinrich), 4 Aufl. Berl., 1893, G. Reimer, 492 pp., 8vo.

——— Psychiatrie. Ein kurzes Lehrbuch für Studirende und Aerzte. Emil. Kraepelin. 4 Aufl., Leipz., 1893, A. Meiner, 717 pp., 8vo.

——— Lehrbuch der Psychiatrie auf klinischer Grundlage für praktische. R. von Krafft-Ebing. Aerzte und Studirende, 5 Aufl., Stuttg., 1893, F. Enke, 710 pp., 8vo.

Rarities. Raritäten aus der Irrenanstalt. P. Näcke. Allg. Ztschr. f. Psychiat., &c., Berl, 1893-4, l, 630-672, 1 pl.

Respiration. Le alterazioni del respiro nei psicopatici; ricerche cliniche sperimentali. Riv. sper. di freniat., Reggio-Emilia. C. Rossi. 1893, xix, 197-215, 1 ch.

Rousseau. Explication de la maladie de J. J. Rousseau, et de l'influence qu'elle a eue sur son caractère et ses écrits. A. Mercier. Ann. de psychiat. et d'hypnol., Par., 1894, n. s., iv, 10, 49, 78.

Speech. Adatok az elmebetegek beszédzaváranak tanahoz. [Contribution to theory of disturbance of speech in mental diseases.] Orvosi hetil., Budapest, 1894, xxxviii, 234, 250. *Also. transl.* [Abstr.]: Pest. med.-chir. Presse, Budapest, 1894, xxx, 832.

Statistics. Is American insanity increasing? F. B. Sanborn. J. Ment. Sc., Lond., 1894, xl, 214-219.

——— Some statistics concerning the curability of insanity. E. A. Christian. Am. Lancet, Detroit, 1894, n. s., xviii, 161-164.

——— A contribution to the statistics of insanity in Cape Colony. Am. J. Insan., Utica, N. Y., 1893-4, l, 519-529.

——— Some statistical facts concerning insanity. G. Allen. Tr. World's Cong. Homœop. Phys. and Surg., 1893, Phila., 1894, 969-976.

——— Alleged increase of insanity. D. H. Tuke. J. Ment. Sc., Lond., 1894, xl, 219-234.

——— [Contribution to statistics of the insane in Russia from 1870 to 1890.] Vestnik klin. i sudebnoi psichiat. i nevropatol., Gadziatzko. F. X. St. Petersb., 1894, x, pt. 2, 40-92.

Suicide. Suicide as a symptom of mental disorder. G. H. Savage. Guy's Hosp. Rep., 1893, Lond., 1894, l, 7-41.

Taste. Sui disturbi del gusto negli alienati. G. Mingazzini. Arch. di psychiat., &c., Torino, 1894, xv, 75-95.

Treatment. Un cas d'instabilité mentale avec impulsions morbides traité par la gymnastique médicale. P. Tissie. Arch. clin. de Bordeaux, 1894, iii, 232-244.

——— De quelques pratiques thérapeutiques anciennes employées dans le traitement de la folie et des maladies nerveuses. P. Moreau. Ann. de psychiat. et d'hypnol., Par., 1893, n. s., iii, 174-177.

——— Dell' azione terapeutica del solfato di duboisina in alcune forme di alienazione mentale, particolarmente nell' istero-epilessia. G. Voena. Ann. di freniat., &c., Torino, 1893, iv, 39-58.

——— On the separate treatment of recent and curable cases of insanity in special detached hospitals, with plan and description of buildings about to be erected for this purpose at the Lancaster County Asylum, Whittingham. J. A. Wallis. J. Ment. Sc., Lond., 1894, xl, 335-344. Two plans.

——— Il solfato neutro du duboisina nei malati di mente. R. e L. Cappelletti. Tambroni. Manicornio mod., Nocera, 1893, ix, 3, 429.

——— Il cloralosio negli alienati. F. et F. Saporiti, Cascella. Gior. internaz. d. sc. med., Napoli, 1894, n. s., xvi, 121-141.

——— Insanity cured by quinin. E. Anderson. Med. News, Phila., 1894, lxiv, 270.

——— Contribution à l'étude de l'action thérapeutique des injections de liquide testiculaire dans certaines formes d'aliénation mentale. Lyon, 1893, 64 pp. 4to, No. 829*. Jean Georges Alembert-Goget.

——— Tratamiento de nuestro-enagenados. M. G. Echeverriá. Rev. de cien. med., Habana, 1894, ix, 185-187.

——— Sull' azione ipnotica e terapeutica del cloralosio nelle malattre mentali. C. Rossi. Riv. sper. di freniat., Reggio-Emilia, 1893, xix, 384-402.

——— Il cloralosio negli alienati. D. e G. Salemi Massaro. Arch. di farm. e terap., Palermo, 1894, ii, 105-113.

——— Sopra gli effetti della trasfusione nervosa col metodo Paul nei malati di mente; nota clinica. C. Rossi. Riv. sper. di freniat., Reggio-Emilia, 1893, xix, 665-675.

——— Scopolaminum hydrobromicum bei Geisteskranken. B. Szalay. Pest. med.-chir. Presse, Budapest, 1894, xxx, 292.

Treatment. Tratamiento de la locura; indicaciones y contraindicaciones de la reclusion manicomial. Siglo med., Madrid, 1893, xl, 726, 742, 758, 773. T. Sánz y Gómez.

——— Du chloralose chez les hallucinés. E. Montyel de Marandon. France méd., Par., 1894, xli, 529-536.

——— Le chloralose chez les aliénés Mercredi med. L. L. Hoest. Par., 1894, v, 405.

——— The effect of ignorance and superstition on the treatment of mental obliquities. H. C. Eyman. Cleveland M. Gaz., 1893-4, ix, 91-102.

——— The treatment and prophylaxis of insanity. J. Punton. Alienist and Neurol., St. Louis, 1894, xv, 52-66.

——— Sulfate neutre de duboisine dans le traitement de l'aliénation mentale. Cong. ann. de méd. ment. Mabille et Lallemant. C.-r., 1892., Blois, 1893, iii, 412-419.

——— Notes on the treatment and management of lunatics in jails. Indian M. Gaz., Calcutta. R. H. Whitwell. 1893, xxviii, 361-363.

——— Des injections sous-cutanées de sulphate de duboisine en médecine mentale. J. Massant. Bull. Soc. de méd. ment. de Belg., Gand et Leipz., 1893, 407-415.

——— Nyere Sovemidler og deres Anvendelse i Sindssygdomme. H. Evensen. (Rés. Sur l'emploi des soporifiques dans le traitement des maladies mentales.) Norsk. Mag. f. Lægevidensk., Christiania, 1894, 4 R., ix, 345-382.

——— Some suggestions as to the treatment of acute mania. J. W. Givens. J. Am. M. Ass., Chicago, 1894, xxiii, 153.

——— Limitations in the treatment of the idiot. B. Jones. Kansas City M. Index, 1894, xv, 231-234.

——— Le chloralose chez les aliénés. L. L'Hoest. Ann. Soc. méd.-chir. de Liège, 1894, xxxiii, 290-298.

——— Subcutaneous infusion of a nutritive salt solution in cases of refusal or inability to take food. M. D. Norris. Rep. Maryland Hosp. Insane, Balt., 1892-3, 51-54.

——— Intorno all' zione del cloruro di calcio sull' eccitabilità nervosa, sull' eliminazione della calce per l' orina negli alienati e sul suo uso terapeutico in alcune psicopatie. U. Stefani. Riv. sper. di freniat., Reggio-Emilia, 1893, xix, 574-633.

Tuberculosis. The prevention of tuberculosis in hospitals for the insane. J. W. Babcock. Am. J. Insan., Chicago, 1894-5, li, 182-195.

——— Tuberculosis in mental disease. W. Channing. Boston M. and S. J., 1894, cxxxi, 62.

Urine. Beitrag zur Lehre der Urinveränderungen bei Geisteskrankheiten, insbesondere bei der progressiven Paralyse der Irren. P. R. Siegmund. (Mit über 1000 Harnuntersuchungen bei 315 Geisteskranken und 2 casuistischen selbstbeobachteten Fällen von Diabetes mellitus und Glycosuria transitoria bei Dementia Paralytica.) Allg. Ztschr. f. Psychiat., &c., Berl., 1894, li, 602-640.

——— A study of the urinalysis of 110 cases of Insanity, admitted to the Maryland Hospital for the insane from November 1, 1892, to October 31, 1893. W. L. Babcock. Rep. Maryland Hosp. Insane, Balt., 1892-3, 55-73.

——— Urinalysis in 100 cases of insanity. W. O. Mann. N. Engl. M. Gaz., Bost., 1894, xxix, 439-442.

——— Note upon the occurrence of indican in the urine of insane patients. E. D. Bondurant. Med. Rec., N.Y., 1893, xliv, 806.

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Part I.—Original Articles.

The Improvable Imbecile: his Training and Future. By A. R. DOUGLAS, Deputy Medical Officer, H.M. Prison, Portland; late Deputy Medical Superintendent, Royal Albert Asylum, Lancaster.

THE cause of the Imbecile has for some time past been a plea which has never failed to elicit the practical sympathy of the public; yet much remains to be done before we have fulfilled our obligation to those who are not lunatics, and are capable, under suitable conditions, of being made self-supporting members of the community. As in this paper I intend to deal chiefly with the future of the improvable imbecile, I think that in the first place the statement that such an individual after training is independently capable of earning his own livelihood is as absurd as it is impossible. I shall presently endeavour to show that without supervision little or nothing can be expected from an imbecile, however highly trained and educated he may be; his whole disposition and temperament away from control completely negatives the supposition, and actual cases have proved that, unless under sympathetic and intelligent guidance, the life of the imbecile as far as usefulness is concerned is not only a blank, but that the individual himself is a burden, and in some instances a nuisance to society and his friends. Secondly, there can be no doubt that much of the careful and patient instruction bestowed upon such cases at the educational establishments is wasted, for the simple reason that at the expiration of their term there many improved imbeciles gravitate to conditions totally unsuitable for

them, and under which it is almost impossible to expect that the training which they have received will, so to speak, have a fair chance. On completion of their term of training it may be that in some cases the parents are dead, and there are no relations or guardians to look after them ; for a large number there is nothing but the workhouse. Again, their imbecile temperament causes others, perhaps in a moment of pique, to abandon the work which has been obtained for them possibly only by a vast amount of trouble, and they thus become a burden to their relatives. A third section are, away from supervision, incurably vicious, and many in the course of their career become gaol-birds and convicts. The imbecile is one who is totally, or in part, bereft of the faculties necessary to enable him to take a successful part in the battle of life, and I think that it may be safely assumed that, in the whirl of this nineteenth century, with its attributes of high pressure and overcrowding in every direction, the imbecile can of himself secure no place. His appearance, his mental and often physical deficiencies, are all dead against him, and his unstable equilibrium, manifested in uncertainty of temper and morals, renders him in many cases quite unfit to be trusted away from proper care and supervision. In fact, it is unjust and unfair to forget this by exposing these individuals to risks by trusting them too far.

With respect to the training of imbeciles, much admirable work is done at the great educational establishments at Lancaster, Earlswood, Colchester, and Exeter, the first named under the able superintendence of Mr. James Diggens. Here the results of training are as hopeful as could be expected when one considers the material which is dealt with, and which at first is often terribly lacking in promise for the future. It is, however, in the industrial departments that one really sees what improvable imbeciles are capable of learning, and what really excellent tradesmen many of them have become under the intelligent supervision and control of instructors, who are, as far as possible, chosen because they possess the requisite qualifications of temper and disposition calculated to gain confidence, which is vitally necessary to manage lads who are often wayward in temper, and prone, from their very infirmity, to idleness and vice.

All who are familiar with imbeciles are aware of those cases

showing remarkable talents, one of which I shall now describe. Here is a lad of twenty years of age : he can read and write well, and is particularly clever at arithmetic ; but when we narrowly observe the boy we find that he suffers from severe athetosis, is quite unable to walk, even with assistance ; one arm is practically useless, and the expression of his features is contorted constantly into horrible grimaces through muscular twitchings. We find that he has a violent temper, is very malicious, a confirmed masturbator and liar. Now here is a case where sufficient education has been imparted to enable him to hold a humble post, but he is so terribly handicapped physically and morally that he is totally debarred from earning his livelihood independently. I adduce another example of this very constant feature in these cases, this unstable equilibrium in varying degrees of intensity. The instance I have in mind is a very different one from the case just cited ; this is a youth with but little of the imbecile in his appearance : smart, bright, and intelligent-looking, he can read, write, and count, and is employed as messenger in an important department of the institution. This youth has times out of number been trusted with money, and, as far as that is concerned, has on every occasion proved himself to be worthy of confidence. His history, however, shows that he on two occasions made his escape from the asylum. The first time he went to a neighbouring watering-place, where he secured employment, and took lodgings at a figure nearly three times as much as he was to earn at his work. He was before long discovered and brought back, and after a short period of resentment returned to his usual frame of mind and went on steadily for about two years, when he again disappeared. On this occasion he went to his native town, some eighty miles distant, having for some time before escaping saved his pocket-money to pay his railway fare. He was brought back by his mother, when it was ascertained that he had proposed marriage to a young lady, to whom he represented himself as a clerk in receipt of a regular salary.

Instances of this marked feature of instability might be multiplied, but I only advance these two in order to show the fallacy of the belief that these improvable cases can be rendered capable of independently earning even the most modest competence. A few, and only a very few, are successful ; but it will be found in nine out of every ten that they have had some advan-

tage in the way of supervision, and that there is encouragement and a helping hand somewhere. That a number of criminals of a certain class are mentally defective in varying degrees of intensity I have no doubt whatever, and many now undergoing penal servitude would never have been there at all had they been fortunate enough to have had the advantage of suitable control, instead of having been left to themselves, cursed with congenital infirmity, rendering them the victims of wild impulses and rampant passions, ungoverned and unrestrained by defective and enfeebled inhibitory faculties. I should be sorry to say that all imbeciles of the type now under consideration are incapable of the elementary education necessary to fit them for holding situations in the humbler walks of life ; for many, as far as the possession of this knowledge is concerned, are quite eligible, but of what avail is this education when mental instability is almost universal ? Surely of no value at all unless such cases are to be continuously subject to superintendence and control. Those who are familiar with imbeciles are well aware how much depends upon the nature of their environment and the character of their associates. One has only to reflect upon the lamentable results following their location in wards with the insane, to be very forcibly impressed by the vital importance of proper surroundings for them, and by the equal importance of supervision by persons possessing qualifications which fit them for undertaking this responsibility. By this I mean individuals of quick perception with keen insight into character, ready to note and understand the peculiarities and idiosyncrasies of those under their care. Above all, such persons ought to be endowed with ready sympathy and kindness of heart. It must never be forgotten that but little can be done with an imbecile unless his confidence is first gained. But where, if we except the training institutions, are we to find these necessary conditions ? Most assuredly not in the office or workshop of the ordinary merchant or artisan ; there the well-being of the unfortunate imbecile would not, in the usual course, be considered before business, and did we succeed in getting an ex-patient into either of them we should possibly find that his " imbecile temperament " was unable to cope with what might strike him as unsympathetic surroundings : if, when instructed as to his work, his superior was in any way curt or brusque, then he would resent it, and immediately

become unsettled. Again, if he had any physical deformity, or happened to be of abnormal appearance, the jeers of his fellow-workmen would cause him acute misery, and an imbecile of this type is always more or less sensitive. This is the hardship which very often handicaps many of those poor lads, for they are often made to feel their inferiority by being made the butt for cruel jest and bitter ridicule. I have already said that much good work is done in the industrial departments of the training institutions. Nearly all these improvable cases are capable of being taught trades, and I know several who are really almost proficient workmen as joiners, basket makers, tailors, and shoemakers. It is most important that in deciding upon a trade to be taught, careful selection be made, and individual aptitude and predilection considered. Farm labour is eminently suitable, and is of course very healthy employment. But of what use is all this training when one considers that the object of this excellent attention will most assuredly, unless placed under suitable conditions, tend to gravitate to the workhouse, the lunatic asylum, or even the prison? Surely it is both time and money wasted if there is not some reasonable prospect of this education being turned to some kind of practical utility.

There can be no doubt that it is the duty of the State to provide some means of permanent guardianship and supervision for these cases. Private charity has been the pioneer of the movement for the training of the imbecile, and the State ought to see that the results of this excellent work, begun and carried on with such conspicuous success, are not wasted or lost by taking steps to enable the improvable imbecile to cease to be a burden, and to help him to lead a useful life. This could admirably be met by the establishment of custodial asylums for idiots and low-grade imbeciles, and would afford a thoroughly satisfactory means of final disposal for a large number of improvable cases who, after having undergone their period of training, could be drafted into the workshops of the tailor, shoemaker, joiner, &c., or do farm or garden work under the supervision of a labour master; and I cannot but think that this system, or one akin to it, if given a fair trial, would prove a great success.

There is one consideration in respect to low-grade, purely custodial cases; as long as the training institutions receive them in large numbers it is not to be expected that such

institutions, supported solely by charity, can, by reason of the absorption of staff which the retention of these patients necessitates, extend the scope of their educational departments to the degree possible under less adverse conditions.

The addition to the county asylums of suitably equipped annexes for the training of imbeciles is a step in the right direction, and it is to be hoped that, failing an effort on a larger scale, we may soon see annexes of this description attached to all the large county asylums. This departure does not, of course, materially approach the question of final useful disposal, yet it will attain a very desirable object in securing a period of training for many imbeciles who would, from the limited accommodation, have been unable to obtain admission to any of the older institutions. Dr. Shuttleworth has pointed out another advantage in the connection of such an annexe with a county asylum, which is that the latter can supply the former with a convenient market for its industrial products.

The Inadequate Asylum Provision for the Insane immediately above the Pauper Class. By DAVID BOWER, M.D., Springfield House Asylum, Bedford.

DURING a period of nearly twenty years' management of a private asylum for middle-class patients, and a like period of consultation practice in our specialty, I have had constantly brought to my notice the difficulty—very often, indeed, the impossibility—of finding proper accommodation for insane patients unable to pay fees of more than fifteen to twenty-five shillings per week, and the difficulty has vastly increased with the increasing numbers of pauper lunatics who now crowd out the already very small number of private patients provided for in county and borough asylums.

This great want in our asylum system has impressed me more strongly recently during the three or four years I have been on the committee of the Three Counties Asylum at Arlesey, and I consider it sufficiently important to bring before you to-day for consideration and discussion.

Often, when patients have been unable to pay, or to continue

to pay our very moderate fees of two and a half, two, or even only one and a half guineas per week, I have found it impossible to get them admitted into hospitals or as private patients into county or borough asylums when their friends were quite willing and able to pay from 15*s.* to 25*s.* per week for their care. In such cases the only resort has been to send these patients to the large London private asylums receiving paupers, or to have them removed as pauper lunatics to the county asylum through the relieving officer, who recovers the actual cost of maintenance from the patient's estate.

This course is very repugnant and humiliating to the friends, and it is extremely hard on patients of limited means, but of respectable position and education, to have to associate constantly by night and by day with patients very much inferior to them in social position, habits, and customs—to dress in the odious pauper uniform, to have to eat the coarse, if substantial fare which can only be provided for them, and to hear the disgusting language of many of their fellow-patients, drawn as they are in large numbers from the very scum of society—prisoners, loafers, tramps, and other vagabonds.

Quite recently, in going round our county asylum, I have seen thus dressed and situated members of the learned professions, the Church, law, and medicine, an officer in the Engineers, the son of an artillery officer, an architect's wife, several respectable tradesmen, their wives, sons, and daughters ; and one lady is there as a pauper who owns the freehold of part of the land forming the grounds of the asylum. In order to make sure that mine is not merely an accidental and unusual experience, and that the practice of sending patients of the middle classes as paupers to county and borough asylums is not confined to my immediate neighbourhood, I have looked through the tables relating to the social status of patients in the Commissioners' annual report just issued, and find my impression fully confirmed.

Taking Table XVII in Appendix A for my purpose, and dealing only with male lunatics (the occupations and social position of the females not being classified with sufficient clearness), I find that the average number of the classes who ought to be provided for as private and not as pauper patients, viz. the professional, commercial, and agricultural groups in the Commissioners' tables down to Class 48 (excluding Classes 19,

21, 22, 23, 24, 41, 42, 43, 46, and 48, and all the classes from 49 to 99 which comprise the wage-earners and those below them), annually admitted to all the asylums, hospitals, &c., in England and Wales, is 1684.

The number of lunatics registered as under care are in the proportion of rather more than five to one of the admissions. A simple sum shows that there were of these "ought to be" private patients under care at the beginning of this year 8420; but the Commissioners' general summary shows that at that time there were classed as private patients in all the institutions only 4076, showing that more than one half are under care as paupers. If we accept the same ratio for the females of these classes as we have found to obtain among the males, it is evident that at least 9000 patients, distinctly above the pauper class, are being housed and kept as paupers for no fault of their own.

Turning now to the position of those patients who are officially classed as private, no less than 1254 are treated in county and borough asylums. These are chiefly distributed among 31 asylums (the remaining 37 county and borough asylums taking practically no private patients). At least half of these 1254 are also compelled to associate with paupers, as most of the 31 asylums can have no separate provision for their private patients.

I ought here to mention that in a certain number of county and borough asylums special and in some cases separate accommodation for private patients at low charges has been provided.

The Cornwall, Cumberland, Cheshire, Denbigh, Prestwich, Northampton, Leicester, and Portsmouth asylums have for a considerable time accommodated 30 to 40 private patients each. Exeter has 67. Three Yorkshire county asylums have about 70 private patients each, and, to the credit of the Yorkshire Lunacy Authorities, a separate asylum is now being built in Wharfedale for 210 private patients. Birmingham city, the Isle of Wight, and Leicester borough asylums are following suit.

The public asylums in the south of England which have in recent years proved themselves most enterprising and successful in catering for non-pauper patients are those presided over by the active and energetic secretaries of this and the South-

western Divisions of the Medico-Psychological Association, viz. the City of London Asylum with over eighty private patients at a pound a week, and the Dorset County Asylum with a similar number at a pound a week and upwards.

I think I have said enough, and have troubled you with statistics enough, to show the want which exists. How, then, can this want best be met? That is the question I claim your assistance in answering.

Insane persons are mainly provided for in four ways, viz.: (*a*) in single care; (*b*) in licensed houses; (*c*) in hospitals, and (*d*) in county and borough asylums. To which of these are we to apply?

(*a*) *Single care.*—I think we might to some extent hope for an extension of home treatment if the medical officers of the county and borough asylums were available for directing the treatment of patients at their own homes, either at the expense of the county, or of the patient where he could afford it. This would also be to the professional advantage of the medical officers and the gain of the community, as the former would thus be able to see cases of insanity in their earlier stages, and assist in the prevention of disease, instead of their work being restricted, as it now usually is, inside the boundary fence of their own asylums.

(*b*) *Licensed houses or private asylums.*—These are already full, and a paternal, not to say suspicious legislature has for good or ill decreed that they shall not be extended nor increased in number. Private enterprise cannot then be looked to to help us in our dilemma.

(*c*) *The hospitals*—one of the best of which we visited at this time last year. These are our great mainstay at present for providing accommodation, and that of a luxurious and splendid character, for the greater half of our non-pauper patients, but they are in most cases practically full, at least as regards the lower paying patients who cannot afford more than 15*s.* to 25*s.* per week.

The stream of benevolence having ceased to flow in the direction of the hospitals, we cannot expect any great assistance from them, although the Commissioners in their latest report say that the abstract of annual accounts of the hospitals "discloses in some instances the receipt of large incomes, which should leave room for the exercise of more charitable provision

for patients of moderate means who stand in need of institutional care and treatment at low rates of payment, in addition to providing and improving accommodation for patients of the wealthier class."

(*d*) The *County and Borough* Lunacy Committees will, to a large extent, have to be looked to for providing the necessary accommodation required, either where the population is dense, by building separate asylums for private patients paying low rates sufficient only to pay for their housing and maintenance, as Yorkshire is doing, or where the population is sparse to add to the existing asylums properly equipped departments for private patients paying low rates, either in separate blocks attached to the main building, or preferably, where sufficient land is available, in separate self-contained buildings of not too high elevation, with grounds round them devoted to the exclusive use of the patients residing there. Authority to provide this accommodation was specially granted to the Local Lunacy Authorities by the Lunacy Act of 1890, and I believe the few authorities who have taken advantage of this clause of the Act have seen no reason to regret the steps they have taken. In fact, I know in at least one case a handsome sum is handed over each year in relief of the rates.

I mention this last fact not with approbation, but as showing that no fear of loss need deter any authority from making this most necessary provision—a course which would not only tend to diminish the numbers of the pauper insane, but would at the same time be doing an act of justice to the respectable and self-respecting lower middle classes who have been so long neglected in this important matter.

Discussion.

At meeting of the South-Eastern Division, Bedford, 10th October, 1898.

The President said that he did not know that there was anything more urgently necessary than the provision of proper accommodation for the insane of the lower middle class. It was extremely desirable that England should assist those who were not of the pauper class, and should preserve that feeling of independence with regard to Poor Law help which had always been the characteristic of the nation. There was one thing which they should specially consider—the question of a profit being extracted from those patients. If those unfortunate people should have to aid the ratepayers, that would be a most undesirable outcome of the change of the law. He thought that such a scheme should be adopted as had been indicated by the Scottish Commissioners; that if the English Act in this particular were to be extended to Scotland, the cost per week of those received into county asylums should not exceed a moderate return upon the expenditure on the part of the counties concerned; that was to say, whatever might be spent upon them,

including the repayment of the necessary capital expenditure, should be the rate per week chargeable; effectually preventing the misfortunes of those in narrow circumstances issuing in a payment in aid of the ordinary ratepayers.

Dr. Emmerson said that in the practice of his profession he had constantly been called upon to certify for removal to asylums, and he had in his mind respectable people who had never been on the rates in any way, and yet the difficulty arose as to where they should go. They did not wish to be sent to a pauper asylum; but too often there was nothing else for it, and they had to become nominally paupers, arrangements being privately made with the guardians that their expenditure should be refunded by the friends. That did not seem a fair thing to the friends nor to the ratepayers, but meanwhile there was no possibility of suggesting an alternative.

Dr. Percy Smith said he was surprised to hear the remarks of the last speaker. Cases similar to those mentioned by him were admitted at Bethlem without payment, or on very low rates. There was always a great number of people who, by reason of their insanity, lost their position, and became members of lower social strata; but for the acute and curable cases there was accommodation, although no doubt it might be largely increased in some parts of the country for those patients of limited means, whom one desired to keep out of county asylums. As to the question of profit which the President had raised, there was nothing to say as far as Bethlem was concerned, or where patients were paying two guineas a week; but one would like to know with regard to Stone and Dorchester, where one guinea a week was considered sufficient, whether the whole of the payments were devoted to the benefit of the patients paying that rate.

Dr. Richards said he thought it was pretty well agreed amongst the medical profession that asylums other than pauper asylums were absolutely necessary for persons of limited means. How were they to suggest the best scheme to the official bodies who had the power to create them? He thought that they should recommend Dr. White's plan of an appendage to the pauper asylum, or an entirely separate institution as at Wharfedale. The latter proceeding seemed to him the better one. If the county authorities had separate establishments just paying their way, where patients could be admitted at the low rates so desirable for that class of patients, it would be much better to have it unattached to the pauper asylum, to prevent the people from confusing the private with the pauper. At Wharfedale they got rid of the idea of making profit for the parent establishment. Those connected with asylums should educate the county councils or their committees in that direction.

Mr. Bayley said that having been connected for many years past with one of their large hospitals, he might be allowed to state his views. He had also been superintendent of a county asylum for a considerable time. It must be remembered that by far the larger number of hospitals were not endowed, but were entirely dependent upon the profits they could make from the patients they received. He believed that Bethlem and St. Luke's were the only two that were endowed. Fortunately they had funds which allowed them to receive patients free of charge. He thought they would be wiser if they did not admit patients free of charge, but at a very low rate, say fifteen shillings a week, and if they made no reduction until they had made inquiry into the circumstances of the patients and their relatives. During the time he had been at St. Andrew's Hospital he had frequently received patients who had been in Bethlem, and whose friends had volunteered to pay three or four guineas a week. With regard to other hospitals, there was no doubt that more might be done by some of them. When he went first to St. Andrew's Hospital they had only eighty private patients, a very few subscriptions, and a very limited income. The greater part of their income had been utilised to relieve the ratepayers of the county. But fortunately they had a committee who saw things in the right light, and who were willing to do what they could to extend the hospital. They got rid of the pauper patients, and they never put a patient on the charity without ascertaining whether his friends were able to pay the amount, and that his former position entitled him to the benefits of the institution. They now had nearly four hundred patients, and the greater number of them paid little more than twenty-five shillings per week. Close upon one hundred were kept either free of charge or for considerably less than the cost of maintenance. This, as he had said, had been done by the energy of the committee of management, and he could not help thinking, if some of the other hospitals in the kingdom would only launch

out in the same direction, an immense amount of good might be done, and a large number of those deserving cases might be relieved. They could not depend on subscriptions. The public did not look upon these cases as requiring charity. If the hospitals were to exist they must make an income for themselves. With regard to the step which had recently been taken in certain county asylums, he looked upon it as a move in the right direction. There was a large number of patients whose former position rendered them hardly fit to associate with the class they had in the hospitals. They were not at home there, although they were not paupers. For educated people he thought hospitals were the proper places, but for the lower middle class he thought that the accommodation proposed in pauper asylums was what they wanted, and he hoped all the counties would do as they had done at Stone and Dorset; but at the same time he did not think there should be a profit made. In some county asylums very large profits had been made: patients had been paying seventeen shillings to one pound a week; they had been clothed and fed as paupers, and the profits had been handed over to the county. He did not see why they should not be received there for the actual cost.

Dr. Percy Smith explained that the circumstances of every case were considered at Bethlem. The relatives had to explain what their means were, and why they were asking for charitable assistance; therefore if Mr. Bayley had had patients from there who were willing to pay, the committee had been deceived.

Dr. Neil said, owing to his late arrival, he was sorry he had not had the pleasure of hearing Dr. Bower's paper. The Warneford asylum was endowed to the extent of about £2000 a year. They made no profit as a whole, and but few patients paid more than the cost of their maintenance, which last year was twenty-eight shillings. The regular charge was two guineas per week, and he thought that there were from eighteen to twenty who were paying part of the maintenance of those who paid less. None were kept free, for the committee had always refused such cases, but some were paying as low as five shillings. If reduction on the regular charge was requested, a petition must be submitted to the committee with a full and candid statement of the pecuniary circumstances of the patient and his relatives; also whether there were friends who could assist and ought to do so. A medical statement of the case was also required. When all this information had been laid before the committee the fee was reduced to the amount the committee thought reasonable. The result was at the end of each year the gross receipts from the patients did not pay the gross cost, and the difference was made up by their endowment They had so far had a balance every year on the right side; but were it not for the endowment it would be on the wrong side. What surprised him was that the asylum had never been full. He would very much like to know what became of those applicants they did not receive, because, so far as he was aware, there was no hospital in England which took patients at a lower average charge than they did. The persons they relieved were the poorer members of the educated class The majority were either clergymen or their near relations. With regard to the extension of such accommodation. few charitable people left money to asylums. He thought that physicians who practised among the wealthy might do good service by advising people to leave money in this way. At Warneford applicants from Oxford had a preference, and he did not think that they had ever refused a case from Oxfordshire.

Dr. Moody said, like all previous speakers, he had been very much struck by the numbers of people of the class mentioned who had been admitted to Canehill from time to time. With regard to Bethlem Hospital, it was a temporary home for many, who were very often drafted to them at later stages of the malady. He had at the present time a barrister, a doctor, and others from there; so really that institution did not supply the want Dr. Bower indicated. He lately saw some patients in a county asylum who were dressed differently from the others, and on asking the reason he was informed that they were allowed to wear their own clothes by paying extra. He did not think that was quite what they wanted. It seemed to him that unless there was distinct accommodation provided for these people it would be very much better to adopt Dr. Richards' suggestion to have separate places altogether. There was a temptation, if a patient became a little excitable, to place him in the pauper wards for a time. Claybury Hall, in London, had been adapted for private patients, and as soon as they imagined that Canehill patients had sufficient means an inquiry was instituted, and they were drafted to Claybury

at once if their friends permitted. He very strongly felt that if they could have separate buildings altogether, quite distinct from the county asylums, it would be a great advantage.

Dr. WHITE said he would give them a little history of how they had developed at Stone. The Act came into force in 1890. Previous to that he had been struck by the large number of patients who were evidently paid for by their relatives, and on making inquiry he found that in many instances they paid 11*s.* 8*d.* per week, which was and is at present the charge for rate-paid patients. But where did the Corporation come in? At 11*s.* 8*d.* per week they were getting nothing for the lodging of these patients! Why should they not be placed upon a proper footing? He ascertained the number of these patients, and one outcome of it was that they had abolished as far as they could the word "pauper," and substituted for it "rate-paid." He thought the sooner every one abolished the word "pauper" the better. As they had learned that day, a very large proportion of those patients who were called paupers were not paupers. He thought to himself that the City was one square mile, they had accommodation for four or five hundred patients, but the City was becoming more and more commercial, and the premises were passing into the hands of caretakers, and there was every possibility that they would have more and more spare accommodation. He found on inquiry that there were any number of patients who had no claim whatever on the City rates, but because they became insane in the City they were taken to the various police courts of the City, and were sent down to Stone and allowed to remain there. He ferreted out all these cases, and made up his mind to have them drafted away to their proper districts. The result had been that he handed in a list to the Committee of as many as he could find out, the Committee handed it to the City authorities, and they were soon reduced by a hundred in their institution. In the meantime the Act of 1890 was passed. He said here was an opportunity of conferring a great benefit upon a suffering community. The Act empowered them to open out the care and treatment of insane for the middle classes. For a long while he had enormous opposition, but after a time the scheme was carried, and in 1892 they began to receive private patients, and up to the present time they had steadily increased in numbers, until they had now 114 of that class. They charged £1 1*s.* a week for board, lodging, washing, and general and medical attendance, and gave the patients bacon and eggs for breakfast in addition to the ordinary fare, and puddings for dinner. They sat at separate tables in the dining hall, had separate seats at the entertainments and at chapel, went out to picnics more than the others, and played in the tennis courts. They also had cricket matches every week, and they were encouraged in every way. Their friends, of course, clothed them. As far as they could, these patients occupied separate wards, but in these wards there were a few rate-paid patients who assisted in the menial work, and if a separate building were employed they would find without these patients they had an enormously increased cost, and they would not be able to do it for the money. They must find their workers among the better set of their rate-paid patients who were accustomed to menial labour, and who would assist in doing the menial work of the ward just as a servant would do in the house. Three or four rate-paid patients only might be in the same ward, but they did not sleep in the dormitories attached to that ward. This extra accommodation could be made by making an extension for private patients on the same estate, and having the people come up from the rate-paid institution to assist at the private institution with the menial labour. Otherwise, as he had said, they would be saddled with a greatly increased cost. He believed there was a fine future for the county and borough asylums if they opened out in the way the Act indicated. It was a magnificent opportunity for helping the class who ought to be helped, and it would pay, not in relieving the rates, because not one farthing of that money they had made had they ever handed back to the Corporation. It was all spent in improvements, and they were now spending £70,000 in improvements, which they had asked the Corporation to give them. They were making new infirmary wards, a new laundry, a detached chapel or church, and the present church was to be converted into a recreation hall, &c. Therefore he was firmly convinced that these blocks might be built as appendages to county asylums, but not as separate institutions. There they were touching upon the province of the hospitals. They only desired to touch the fringe of the question. They wanted a hospital for each county before they could touch the whole question, or

before they could accept any case that came before them. The class for which they were hoping to cater was a very large one. Dr. Bower had told them that there were 9000 above the rate-paid class who ought to be catered for, and it was for them that they ought to do their utmost to extend every benefit they possibly could; and he honestly believed that by doing so they would really gain for themselves any amount of thanks from people yet to come.

Dr. RICHARDS asked whether the profits made out of private patients were devoted to the pauper portion of the asylum as well as the private.

Dr. WHITE said certainly they were; both must participate. But it had never been that those profits were so large that they had not had to go and ask for a grant for repairs.

The PRESIDENT said Dr. Emmerson held that it was not fair to the ratepayers to provide accommodation for the poor private insane. If the superintendent of a county asylum refused to admit these as paying patients they would simply come as paupers, and that certainly did not relieve the rates. But it was not an honest, it was not an English method. At the beginning of the century the flow of charity towards the hospitals was very remarkable, but the circumstances were now quite different. Some years ago, when Dr. Clouston was taking credit for having done much charitable work, a Radical paper, now happily extinct, said that was not what they wanted at all. It asseverated that everybody had a right to adequate treatment apart from charity. They had to deal with people classed as they found them. The middle class, the professional class, were not so difficult to deal with, as there were not so many of them, and as their circumstances were often easy; but there was an immense number of the poorer class just above the "pauper" class spread over England. The founder of Murray's Asylum directed that his money should not be used as a grant to aid the ratepayers, but that it should benefit those who had no claim to be called paupers; that was to say, he desired it to benefit those who did not belong to that class of society who immediately fell into pauperism when afflicted with insanity, but the educated middle class fallen on evil days. With regard to the great army of poorer workers, whose interests ought to be considered, and whose self-respect ought to be maintained, he thought that Dr. White was certainly right in providing for them at the minimum rate. There was hardly an asylum where there was not an old Bethlem patient, so that Dr. Percy Smith could not rightly claim it as sufficient. Besides, it was at the end of a year that the pecuniary strain generally began. The Scottish Commissioners fixed a rate of payment for these cases. They formerly said that they did not consider that the Royal Asylums were doing their duty unless they took patients at £25 a year; £35 would be nearer the mark now, considering the average rates for paupers in the Scottish asylums. But he had already spoken in entire concurrence with the later views of the Commissioners. He certainly thought a great many deserving people in England would find difficulty in paying £1 a week. The question Dr. Neil had raised was extremely interesting. For many years he (the speaker) had kept a register of the reasons of applications for admission not carried out, and found that a great number of them recovered or became manageable at home. Many became pauperised; the friends recognised that the county asylum was most suitable; some preferred other hospitals on considering relative advantages; and lastly, there was a certain number who delayed and were admitted later.

Dr. BOWER said the object of his paper had been far more than gained, for it was extremely gratifying to him that the choice of the subject had evoked such valuable expressions of opinion from the representative of the general practitioners, from the superintendents of hospitals, and from public asylum men, who had all given them valuable information. He thought probably in the more densely populated districts separate asylums would have to be adopted, and he had in his mind the absolute impossibility of the superintendent of a large asylum undertaking private patients as well as paupers.

The Workmen's Compensation Act and the Fatal Accidents Inquiry (Scotland) Act in Relation to Asylums.

By J. G. HAVELOCK, M.D., Royal Asylum, Montrose.

THE necessity of a cognizance of those Acts of Parliament affecting asylums in their capacity as large employers of labour has become more obvious of late by the operation of an Act which came into force in July last—"The Workmen's Compensation Act"—where, for the first time in British law, a responsibility has been cast upon an employer to pay damages or compensation for personal injuries which are not the result of any negligence or other unlawful act, either of himself or his servants for whose conduct he is legally responsible.

By the *common law* a master has always been bound to take reasonable precautions to ensure the safety of his servants, and is liable for damages where the servant has suffered an injury due to the want of such reasonable precautions. The servant takes on himself all the ordinary risks incidental to the employment, but the employer is liable for what could be seen and prevented, was bound to select competent persons to superintend and carry on the works, and was bound to furnish proper tools and appliances. At common law the master was not liable where the servant accepts danger as one of the ordinary risks incident to his employment, where the accident was caused by the negligence of a fellow-workman (known as the "doctrine of common employment"), or where the workman was guilty of contributory negligence.

The Employer's Liability Act of 1880 swept away the defence of "common employment" so far as the master was concerned, and rendered him liable for injury caused by reason of the negligence or carelessness of a manager, or defect in the condition, &c., of the works or plant used in the business of the employer. This Act was open to the objection that its phraseology is provocative of much litigation, ([1]) and the workmen thought that the Act did not go far enough, and as the result of further agitation the Workmen's Compensation Act (1897) was passed.

Workmen's Compensation Act.

Under the provisions of this Act there is for the employer what may be termed universal liability for accidents falling under its scope. Previously, negligence in one form or other was the foundation of every claim for damages at the instance of a workman against his employer. Now, however, every employer is liable for all injuries through (1) inevitable accident; (2) fault on part of fellow-workman or fellow-servant; and (3) any other cause. There are just two exceptions:—(1) where the injury is attributable to the serious and wilful misconduct of the workman; (2) where the injury has not arisen out of, or in the course of the employment.

The Act is, however, limited to certain trades. Amongst them we find employment on or in any quarry, factory, or any building which exceeds thirty feet in height, and is either being constructed or repaired by means of a scaffolding, or being demolished, or on which machinery driven by steam, water, or other mechanical power is being used for the construction, repair, or demolition thereof.

"Workman" includes every person who is engaged in an employment to which this Act applies, whether by way of manual labour or otherwise, and whether his agreement is one of service or apprenticeship, and is expressed or implied, is oral or in writing.

"Factory" includes every laundry worked by steam, water, or other mechanical power.

It is evident, therefore, that various employés about an asylum will frequently fall within the scope of the Workmen's Compensation Act, such as joiners, masons, painters, laundry-maids, &c.

Before the passing of this Act a workman had two modes of getting damages—common law and Employer's Liability Act, and this Act provides him with a third.

The sums payable under the Workmen's Compensation Act are—

In case of death.—A sum equal to the workman's earnings during the three years prior to the injury, or during such period as he may have actually been employed. In either event the sum payable shall not be less than £150, nor more than £300.

These sums are payable, however, only when deceased leaves

persons wholly depending upon him. If they be dependent only in part the sum may be settled by agreement, or failing that by arbitration. Where deceased leaves no dependants the employer must pay a reasonable sum for medical and burial expenses, not exceeding £10.

In case of non-fatal accidents.—1. No payment requires to be made during the first two weeks of disablement. 2. After the first two weeks the sum payable will be one half of the average wage of the injured person before accident, but not exceeding £1 a week. After six months this may be commuted by a lump sum.

It is obvious, therefore, that this new Act has thrown upon all employers a liability for what is known as "inevitable accident," and it is probable that the managers of many asylums will effect insurance against the possible demands made upon them in the case of accidents to their employés.

A plan of insurance has been tentatively entered into at Montrose Asylum, whereby the risks to the employés are fully covered—at common law, Employer's Liability Act, and Workmen's Compensation Act.

For this purpose the employés have been divided into two classes :

1. Those insured against claims at common law, and under Workmen's Compensation Act, and Employer's Liability Act. These include the painters, plumbers, joiners, engineers, grieve, firemen, slater, and the laundresses. The premium paid is at the rate of *7s. 6d.* per cent. on the wages paid.

2. All the other employés are insured only against claims at common law and under the Employer's Liability Act. In their case the premium paid is at the rate of *2s. 3d.* per cent. on the wages bill. One great objection which may be urged against this system of insurance is that the company inserts as a condition on their policy that they may defend a claim in a court of law in the name of the employer.

As the Workmen's Compensation Act very expressly provides that all questions arising under this Act between employers and employed may be settled by arbitration, one feels naturally reluctant to throw one's self entirely into the hands of an Insurance Company who, under the name of the employer, on principle, may fight the matter out to the bitter end entirely irrespective of the wishes of the employer.

A better way for providing for the risks as far as asylums are concerned may be found in the formation of an Accident Scheme or Fund. This is expressly recognised in the Act, but the scheme must be approved of by the Registrar of Friendly Societies as not being less favourable to the general body of the workmen and their dependants than the provisions of the Act. The employers must necessarily contribute largely to the scheme; the workmen get the benefit should an accident happen, and should no accident happen the funds are always increasing. Under such a scheme as this the workman would get paid during the first fortnight's disablement, which of course is not allowed for by the Act.

In ordinary asylum work, fortunately, serious accidents are not common, and it has been the custom at Montrose to allow full wages to any servant injured in the service, and to treat every case in a liberal way on its own merits.

This meets the circumstances adequately where an injured person leaves no dependants, but cases may arise where compensation is demanded on their behalf, and it seems a sound and business-like policy to effect insurance against such claims. (2)

Fatal Accidents Inquiry (Scotland) Act.

The other recent Act of Parliament to which I shall refer is one which makes provision for *public inquiry* in regard to *fatal accidents* occurring in industrial employments or occupations in Scotland.

This Act extends to and includes all cases of death of any person or persons, whether employers or employed, engaged in any industrial employment or occupation in Scotland, due, or reasonably believed to be due, to accident occurring in the course of such employment or occupation.

"Industrial employment or occupation" is defined to mean any employment or occupation for, or in the performance of, any manual labour, or the superintendence of any such labour, or the working, management, or superintendence of machinery or other appliances, or animals used in the prosecution of such work.

The Act goes on to state that the Procurator Fiscal shall collect evidence in the case of such a fatality, and lay it before the sheriff, who thereupon shall pronounce an order for a public inquiry. The inquiry shall be before a sheriff and jury, and

evidence having been led, the jury must return a verdict stating when and where the accident took place, and the cause or causes of the death or deaths.

Relatives and employers and other parties interested may make an appearance at such inquiries.

The verdict, evidence, and productions must be forwarded to the Crown Agent; the whole procedure, in fact, resembles that of a trial by jury in a Sheriff-court.

The Act does not any way affect the existing law and practice relative to the duties of Procurator Fiscals to inquire and report to the Crown Agent in regard to deaths from accident.

The interest of this Fatal Accidents Inquiry Act in its bearing on asylums depends upon the interpretation which is placed upon the definition of "persons engaged in any industrial employment or occupation." The expression "employment or occupation for or in the performance of *any manual labour*, or the superintendence of any such labour," seems to me to include the large majority of asylum workers, for these are all, at one time or another, engaged in some kind of manual labour. This has been interpreted in a much wider sense, as "any person or persons, whether employers or employed," has been assumed to cover all patients who are industrially employed.

In this connection it may be pointed out that in the Fatal Accidents Inquiry Act asylums are not specifically excepted from the provisions of the Act, as they are, for instance, in the Factory and Workshops Act, which was passed in the same year.

(1) This is probably not an objection in the eyes of the legal practitioner.—(2) The writer is indebted to the excellent manuals on the Workmen's Compensation Act by Wilson and Willis.

Discussion.

At the meeting of the Scottish Division, Edinburgh, 10th Nov., 1898.

The President said that this was a matter which required attention. After considering the question carefully he thought that it was better not to insure. There was a fatal accident lately in Perth in a private house, and a public investigation took place. The gentleman concerned wished to do something for the widow and family, but the insurance company, who protected their own interests in the first place, and the interests of the contractor in the second place, prevented him from doing anything to help. The company insisted that the case must be fought out in the courts. He thought that it would be most undesirable for asylums to figure in the courts in respect of cases of that sort. He considered that an old established business was sufficiently powerful in its organisation and its finance to deal with any case that might occur, and that the asylums were in a similar position. He would remind the members that they were still waiting the passing of the English

Lunacy Bill before proceeding with their scheme for pensions and gratuities to the officials of Scottish asylums.

Dr. Clouston said that at Morningside they had done nothing as yet with regard to the Workmen's Compensation Act. He asked Dr. Havelock if they insured on the initiative of the committee or after taking legal advice.

Dr. Havelock said that it was done as a matter of business. They considered it to be a sound business principle to insure, for a time at least, against the liabilities imposed by this new Act until they saw how it would affect the asylum. The insurance companies did not know how the Act might work.

Dr. M'Dowall said that in various English asylums, judging from the number of circulars he received, the matter was commanding very general attention. He did not know of any asylum where this form of insurance had been adopted. In the West Riding of Yorkshire they decided to do nothing. In Northumberland they thought that it was scarcely worth while insuring. They always treated their employés with great generosity, and never had a man seriously injured; but if a man was off work owing to some slight injury he always got full wages. They had people suffering from serious sickness, and their rule was that they got half their wages as long as they were ill. If the illness ran on for some months, and the man was not getting better, then they took into consideration the advisability of pensioning him off. They had been very liberal in granting pensions. In Northumberland there seemed to be no probability of their insuring themselves against these risks, especially when they took into consideration that they were not allowed to interfere benevolently, and that litigation might be raised by the insurance company in spite of their protests. He was convinced that his committee did right in declining to insure against any risks of that kind.

Dr. Rutherford said that his Board had not thought of insuring. In the case of district asylums, with the ratepayers at their backs, they should be considered more as charitable institutions than as factories. At any rate, he thought that if it was right that a person should have compensation he should get it; if it was the law that he should have compensation he should get it. His own feeling was that they should not insure, and that each case should be dealt with on its own merits. Accidents happened so rarely that there was very little risk under the Act.

Dr. Hotchkiss said that the Gartnavel Board had never discussed the question, and had done nothing with regard to it. In slight accidents the attendants, in his experience, not only got their full wages, but they were often members of Friendly Societies, and got an allowance from them, so that they actually benefited pecuniarily by being laid up.

Dr. Carlyle Johnstone said that it seemed to him that compensation under this Act was a strictly legal question, and one which would have to be dealt with by their Boards of Directors. He was much indebted to Dr. Havelock for bringing up this matter before the meeting, and he should place it before his own Board.

Dr. Clouston said that he did not agree with Dr. Johnstone when he indicated that this was not a suitable subject for discussion. He thought that they should discuss whatever related to the welfare of their institutions. There was very little done without their initiation, and he thought that this was a proper thing to bring before their directors; but before advising anything they ought to be sure as to the interpretation of the Act, and as to whether it applied to them or not. He would therefore place the question before the legal members of the Board of the Royal Edinburgh Asylum. Meanwhile he would refrain from giving any opinion, as the Act was new to him.

Dr. Havelock said that the great objection to insurance was that the company insisted, as a condition of the policy, that they might defend the claim in a court of law in the name of the employer. At Montrose, when an accident happened, the managers had always paid the full wages and continued the person in the service for an indefinite length of time. That had been the case in the past, and he had no doubt that it would be the case in the future. Still, when the law gave a class of servants right to demand compensation under the Workmen's Compensation Act, it was perhaps business-like to do as they had done, and he thought that the managers of the Montrose Asylum acted in a business way when they insured themselves against any possible risks. The insurance was of a temporary nature; it terminated at the end of a year, and it might or might not be

renewed. Perhaps, as Dr. Johnstone indicated, this was not a matter which interested the Association from a psychological point of view, but he had always found it desirable to have as much information as possible regarding all affairs that might touch an asylum in addition to purely medical questions.

Dr. IRELAND said that it seemed quite out of the way for an important asylum to go to an insurance company to save themselves from small risks. They could imagine small asylums insuring against these risks where they were anxious to avoid possibly large expenses. They had a right to discuss the law and to consider it carefully, because they were all supposed to know something about it. They all had attended lectures on medical jurisprudence, and on that particular part of the law they generally understood things better than the lawyers themselves.

The PRESIDENT suggested that they should adjourn the debate until their spring meeting, when Dr. Clouston would be able to speak with authority on this branch of the subject.

Dr. CLOUSTON said that he would try to get an opinion by that time, and the suggestion of the President was agreed to.

The PRESIDENT said that the second section of Dr. Havelock's paper was before them some little time ago, and he called upon Dr. Turnbull to refresh the memory of the meeting.

Dr. TURNBULL read the extract from the minute of the previous meeting, in which the subject had been referred to.

Dr. JOHNSTONE said that in the first place it seemed to him that questions of law were involved which they were not competent to discuss. Speaking as a layman, it seemed to him that the law did apply to asylums, but he did not bring that opinion before the meeting as having any value. It was a question for a lawyer. At present all cases of fatal accidents must be reported to the Fiscal, and it rested with the Fiscal to take what steps he considered necessary. It was not for them as members of the Association to criticise the procedure of a Crown legal officer or to suggest to him an interpretation of thelaw. He knew that some of them had a good deal of feeling in regard to the publicity brought about by this Act, but he did not think that they had any reason to fear that publicity. On the contrary, he thought that they should welcome it. They should continually endeavour to persuade the public that asylum work was not work done in darkness. There was nothing done in asylums of which they were ashamed. Asylum management was, in fact, a large and important part of public work, in which the public were interested. As regards the claims of their patients another question arose. Was it to the advantage of their patients that the public inquiry imposed by the Act should be held? It seemed to him that it would be to their detriment. The interests of their patients were sufficiently protected under existing arrangements. In the event of this Act applying to fatal accidents in asylums their patients would be liable to be exposed in a public court of law. Their actions, their sayings, their demeanour, and their private affairs would all be published in the public newspapers. This, they could easily conceive, would be a distinct prejudice to their interests and a source of distress to their friends. It seemed to him, on the whole, that the insane would suffer if included within the scope of this Act, but in other respects he had no objections to the Act at all. He did not think that asylum officials would suffer, but if they did suffer, it could only be because they had deserved it.

Dr. TURNBULL said he thought it was very desirable that they should know where they stood, because in the short time that the Act had been in force there had been two opposite interpretations of it. The suicide of a patient did not come under the scope of this Act, but was provided for by the old form. If they were employing a patient in some work intended for the benefit of his health, and he had an accident, it should be inquired into by one procedure or another; and they came to the point, did the mere fact of employment in the wide sense of the word mean that they were to be brought into public inquiry to make sure that all necessary precautions had been taken, and to see that no patients were subjected to undue risk? Personally it seemed to him that they got at it by the old procedure quite well, but he shared with Dr. Johnstone the feeling that if there was any objection to having these things publicly inquired into, the objection should not come from their side unless they could say that it would do harm to the patients. The Procurator Fiscal in his (Dr. Turnbull's) district said it was a very nice point indeed

whether the mere filling up of the time of the patients with occupation for their benefit came under the heading of employment in the sense in which it was intended to be used in the Act. It was, however, desirable that they should know exactly how the new Act affected them.

Dr. CLOUSTON said that he felt strongly that their patients were not employed in any industrial occupation in any ordinary sense of the term, but that they were under medical restorative treatment—a treatment which might be profitable or unprofitable to the asylum. He was astonished that there was a public inquiry into the case at Rosewell. That seemed to him to be utterly beyond the scope of the Act. An insane person was specially protected by the Lunacy Acts and the Lunacy Commissioners, and was, as an insane person, excluded from this particular Act. He received no wages for his employment; there was no contract. There was no doubt a tendency—perhaps a proper one—to say that all accidents which happened in asylums happened through carelessness, and a jury might be unduly harsh in their verdict in the case of a patient. In that way there would be unmerited risks to the reputation of their institutions, and they all knew that it was perfectly providential that they had no accidents in their steam laundries, and yet the patients were employed there to their manifest advantage. No one could go into these places and see the patients working without feeling that some day or other they would have an accident. He thought it would be prejudicial to the interests of the insane to have an inquiry into these, because it would make them less inclined to run risks for the patients' good. He asked if there was any possibility of getting legal opinion to bear on the Procurator Fiscals, so as to exclude the insane from the operation of this Act. Everything that tended to make the superintendent of an asylum fearful about giving his patients liberty, and that made him hesitate to give certain patients the benefit of the doubt, would be distinctly bad; and he felt sure that had there been fatal accidents inquiries and coroners' inquests in Scotland they never would have had the open doors and that amount of liberty which he believed distinguished them in Scotland from their brethren over the border.

Dr. MCDOWALL said that when he first went to England he went in terror of the coroner, but he had lived long enough there to feel that it was a good thing to have public inquiry. He always taught his staff to perform their duties with a sense of responsibility to the best of their ability and with pure motives. If they did that, then they need not be afraid of a coroner or any one else. He had these inquiries morethan once in the Northumberland Asylum, and never had reason to complain of the treatment received from a coroner or jury. He was satisfied in his own mind that the feeling through the whole staff that they might be at any time called upon in a public court to answer for their conduct had a most wholesome effect. He reminded them that there is inquiry into the death of prisoners, although they received no wages. He was sure that Scottish superintendents had nothing to fear in regard to public inquiry into any accident.

The PRESIDENT said that inquiries into prisoners' deaths were inquiries under a special Act, but that the question now before them was whether it was desirable that public inquiry should be held in regard to fatal accidents in asylums. If that were desirable they might let the matter drop; if not, they might in the meantime ask Dr. Clouston to obtain legal opinion as to how far this Act affects the insane in asylums in the manner he had kindly indicated.

The meeting agreed to the latter alternative and the adjournment of the discussion till next spring.

A Communication on the Macroscopical and Microscopical Appearances of the Uterus and its Appendages in the Insane. By J. G. Gordon-Munn, M.D., F.R.S.E.

Whilst it is the object of this paper to deal with the subject in the main as limited by the title, it is well that some consideration be given to the general literature bearing upon the relations between diseased conditions of the uterus and appendages and diseased conditions of the mind.

It has long been held that a decided relation does exist between pathological conditions of the sexual apparatus in women and insanity. So far, indeed, has this been carried beyond the limits of sound judgment, that certain writers have ventured to propose excision of certain portions of the genital organs as a remedy for morbid conditions of the brain: one such instance of this literature is a pamphlet by Dr. J. Baker Brown, published in 1866, recommending "Clitoridectomy, a cure for certain forms of insanity." In many instances it might appear as rational, in view of the great advance in brain surgery, to excise certain portions of that organ which are believed to have a relation to the sexual apparatus for morbid conditions of the latter. It has to be said, however, that the operative removal of the overies and tubes on both sides produces in many cases a distinctive altered mental status, as much a sequel to the operative procedure as is the altered mental condition following removal of the thyroid gland. Albeit the train of symptoms following the two operations presents little, if any, analogy, and so far as it is at present known they afford different fields of speculation as to their cause.

Such publications as the one above referred to have in no way checked sound clinical and other observations which go to establish the relations between sexual and mental pathology. Going so far back as 1819, we find that Dr. Robert Gooch, in his observations on puerperal insanity, dwells ably on the relation of organic derangement of the uterus to insanity. Drs. C. and F. Fox, in the 'Report of Brislington House' for 1864, assert that masturbation, which may be dependent in many instances on a sexually pathological condition, may be in turn a cause

of insanity, and not only a symptom of an unsound mental condition.

In 1869 Dr. Louis Mayer, in his 'Die Beziehungen der Krankhaften Zustande und Vorgange in den Sexual Organen des Weibes zu Geistessterungen,' comments on the altered mental condition during pregnancy, menstrual onset, and menopause, amenorrhœa, uterine congestion, vaginismus, and other sensitive conditions of the external genitals, pruritus vulvæ, dyspareunia, conditions of tumours of sexual organs, procidentia uteri, chronic endometritis, cancer of cervix, and malpositions of the uterus. These in cases cited he relates to hysteria, somnambulism, folie circulaire, erotic mania, melancholia, hypochondriasis, &c.

Pozzi, in his 'Gynæcology,' 1891, says, "It is certain that any genital disease in a woman predisposed to hysteria will produce a developement of that neurosis. Dr. G. R. Shepherd, in the 'Yale Medical Journal,' 1894–5, contributes an article on 'Uterine Mal-positions and Diseases as a Cause of Insanity.' And H. A. Tomlinson in 1893, in 'The Association of Visceral Disease with Insanity,' also deals, though not so directly, with the subject under consideration.

In 1897, too, this subject was dealt with at the British Medical Association meeting at Montreal by Drs. Rohé, Hobbs, Russell, and Clark. In the discussion of this subject, as might have been expected, the members of the section showed but little sympathy with the practice of Drs. Rohé and Hobbs. Dr. Alexander adduced strong evidence against the statements in favour of the high percentage of disease when he said that out of the thousands of post-mortem examinations at which he had assisted at Hanwell, but very few showed evidence of pelvic disease.

Such is a short summary of the literature on the subject. Amongst the larger general treatises on the diseases of women, Dr. J. C. Skene, of New York, devotes a chapter to 'Gynæcology as related to Insanity in Women.' He states that insanity is often caused by disease of the procreative organs; that an acute disease of the ovary or uterus, or displacement of either, is sufficient to cause mental derangement, which will subside when the disease of the pelvic organs is relieved; that there is, indeed, amongst women a distinct class of insane cases where the ætiology must be studied from the point of view of

diseased sexual organs. The derangement in such cases may be functional, or, with less hopeful prognoses, organic.

Amongst general considerations he remarks upon the difficulties to be encountered in this field of observation, mentioning amongst others the comparatively little help obtained by reference to the case-books of the larger asylums.

It would appear that this must be the case for some time, and coming more particularly to the subject-matter of the paper, it has been deemed well to place on record a series of cases the insane conditions of which being first summarised, full consideration is then given to the macroscopic and microscopic post-mortem appearances of the uterus and its adnexa.

Thereafter is appended a brief summary of these points, which would appear to be the more important in regard to (*a*) the Gynæcology of the Insane, (*b*) General Gynæcology.

In 246 consecutive post-mortem examination at the London County Asylum at Cane Hill, I found only 33 instances of pelvic disease, or a percentage of 13·8.

Series of Cases.

1. S. R. H—, æt. 62. Widow, three children. Chronic mania of several years' duration; noisy, excitable, troublesome, and delusional.

Post-mortem. Naked-eye Appearances.—(1) Right appendages: tube $3\frac{1}{2}$ inches, normal. Mesosalpinx normal; parovarium very indistinct; one small simple broad ligament cyst projecting posteriorly. Right ovary: atrophied 1 inch × $\frac{3}{8}$; tissue pale in section, and in an atrophied follicle there is a dark-stained detachable lining membrane. (2) Left appendages: tube 4 inches, normal. Mesosalpinx normal; parovarium very indistinct; two minute simple broad ligament cysts projecting posteriorly, also one projecting anteriorly—marble size—contained straw-coloured albuminous fluid. Ovary atrophied, $1\frac{1}{3}$ × $\frac{1}{2}$ inch, indistinct traces of Graafian follicles. Tissue pale. (3) Uterus: external measurement 2 × 2 inches; senile atrophic changes marked, small fibro-myomatous nodule, pea size, on the middle of posterior wall.

Microscopic Appearances.—Ovary × 90: tunica albuginea thick; no ova near surface; follicles are crowded irregularly here and there, and what appears to be dense fibrous

tissue surrounds them. × 690 : vessel walls thickened, many of them have their lumens obliterated. Uterus × 90 : large thick-walled vascular spaces seen, and the atrophied remains of utricular glands ; vessel walls generally are thickened. × 690 : glandular epithelium small ; fibrous tissue seen in excess in the vessel walls.

2. A. S—, æt. 33. No occupation. Single. Predisposing cause, heredity ; exciting, alcohol. Father and two sisters died of drink. Admitted December 3rd, 1895. Died January 10th, 1896. Mania a Potu. Heard voices, &c. Feeble, very restless, noisy, and sleepless ; dirty and destructive in habits. Had deep corneal ulceration and conjunctivitis.

Post-mortem.—Thin, poorly nourished ; œdema of fine brain membranes ; lateral ventricles dilated ; liver fibrosed, 60 oz. ; numerous gall-stones ; kidneys congested ; some congestion of the external os. (1) Right appendages : tube 4 inches, normal. Mesosalpinx : parovarium very well defined. Ovary : $1\frac{3}{8} \times 1$ inch. On section well-defined marginal follicles ; stroma appears somewhat hæmorrhagic. On section black pigmented scar. (2) Left appendages : tube 5 inches, normal ; parovarium small but distinct. Ovary : replaced by a unilocular cyst of large orange size and shape, containing clear straw-coloured fluid ; cyst has a smooth lining, and its walls are thicker towards the hilar portion, traces of ovarian tissue being recognised here ; no superficial adhesion sites. (3) Uterus : externally $2\frac{1}{2} \times 2$ inches, mucosa smooth, shows some black pigment near the orifices of Fallopian tubes.

Microscopic Appearances.—Ovary × 90 ; tunica albuginea dense ; there are many blood-filled follicles irregularly accumulated. There are many also which are not blood-filled, but those of any size are irregular in shape. Very few of the follicles contain healthy ova. There are also seen large stromal ecchymoses. × 690 : whilst the albuginea is dense there is no marked tendency to the formation of fibrous tissue. Round the follicles blood-vessel walls are well marked. Uterus × 90 : vessel walls are seen to contain a considerable amount of muscular tissue. Cyst wall × 90 : composed mainly of wavy bundles of fibrous tissue. There is considerable differentiation into layers ; one or two large blood-vessels are seen. × 690 : there is also some muscular tissue in the wall, the epithelial lining on the inner surface of the walls is not distinctly seen.

3. A. G—, æt. 22. Single. Servant. Suffering from mania passing into dementia ; had syphilis.

Post-mortem. Naked-eye appearances.—(1) Right appendages : tube—4 inches, small fimbriated end much congested. Mesosalpinx : veins congested ; parovarium indistinct. Ovary : elongated though small—$1\frac{1}{4} \times \frac{1}{2}$ inch ; superficially pale and smooth. On section a few small follicles seen ; stroma hæmorrhagic. (2) Left appendages : tube $3\frac{1}{2}$ inches ; no fimbrial congestion. Mesosalpinx : veins less congested ; parovarium distinct. Ovary $1\frac{1}{4} \times \frac{5}{8}$ inch, smooth and pale superficially, on section considerably paler than right ovary. (3) Uterus : $2\frac{1}{4} \times 1\frac{3}{4}$ externally. On section arbor vitæ well marked ; mucosa of corpus smooth and non-hæmorrhagic.

Microscopic Appearances.—Right tube (ampulla) × 90 : walls thickened ; blood-vessels much engorged, many ecchymoses, mucosa irregular and imperfect. × 690 : mucosal fronds show marked leucocytosis, columnar ciliated epithelium is retained over many of them ; irregular-shaped cells are seen in the lumen between the fronds. Right ovary × 90 : no large follicles are seen near the surface, there are many at the deeper levels ; the vessels are numerous and engorged, and there is some stromal ecchymosis. × 690 : many of the young follicles are perfectly formed, some of the older ones are represented by blood-filled spaces. Uterus × 90 : walls appear normal ; the mucosa is irregular. × 690 : catarrhal changes are seen in the uterine glands.

4. A. P—, æt. 79. Suffering from chronic mania ; duration thirty years. Married, and had a family.

Post-mortem. Naked-eye Appearances.—(1) Right appendages : tube 3 inches ; fimbriæ attenuated, tube slightly thickened at mid-portion ; ovarian fimbriæ tense and thickened. Mesosalpinx : from the anterior surface close to hilum of ovary there springs a glove-finger shaped cyst $1\frac{1}{4}$ inches long by $\frac{1}{4}$ inch wide ; there is fat in the composition of its walls ; near the extremity it contains turbid yellow watery fluid ; parovarium very faint in outline ; ovarian sac well marked. Ovary : size normal ; irregular nodulated surface, due to projection of small cysts. On section the tissue is seen to be almost wholly cystic ; the cysts are from shot to pea size, and contain yellow viscid material. Left appendages : tube $4\frac{1}{2}$ inches, normal. Mesosalpinx : healthy ; parovarium outlines very faint. Ovary

irregularly rounded in shape, 1 × ½ inch ; surface irregularly nodulated as on opposite side. On section the organ is wholly cystic except in its upper outer third, where there is a densely calcified corpus luteum of marble size. Contents of cysts are straw-coloured watery fluid. Uterus : senile changes. On section a turbid, yellow, watery fluid is seen in small quantity in cavity of uterus itself. In its mucosa the mouths of the glands are well seen, and a similar fluid is expressible from them. The cervical canal is blocked by an abundant muco-purulent secretion like white of egg.

Microscopic character of fluids of uterine cavity proper : epithelial cells in various stages of fatty degeneration ; no mucous globules.

Secretion of cervical canal : mucous globules, pus cells, epithelial cells in various stages of fatty degeneration. The os internum is very narrow ; the cervical canal is much widened, and seemingly excavated by some process which has produced the muco-pus described (see microscopic section of cervix).

Microscopic Appearances.—Right tube × 90 : muscular and fibrous factors of the wall thickened ; mucosal plicæ simplified. × 690 : epithelium of mucosa is shed in many parts ; leucocytosis is at parts marked ; many of the crypts are full of small, closely packed, irregularly shaped cells. Uterus corpus × 90 : glands not well seen. × 690 : proliferation of connective tissue of the wall, also the cellular structure of the glands is not well seen in the specimen. Right ovary × 90 : one or two large blood-filled follicles. × 690 : the membrana granulosa of the blood-filled follicles is proliferative ; blood-vessels well formed. Corpora-luteal remains partially organised are seen. The excavation of the cervix is surrounded by firm fibro-muscular tissue and lined by irregularly distributed and proliferative cylindrical epithelium.

5. E. D—, æt. 35. Congenital imbecile. Very excited, noisy, destructive, and troublesome.

Post-mortem. Naked-eye Appearances.—(1) Right appendages : tube 3½ inches, normal ; within ½ inch of fimbriated extremity there springs from the upper surface of the tubes a slender stalk of ½ inch in length ; this stalk terminates in a rosette of minute fimbriæ, and from its centre another and still finer stalks springs ¾ inch in length, terminating in a unilocular cyst of pea size containing albuminous fluid (pedunculated

hydatid). Mesosalpinx vascular; parovarium small. Ovary elongated, $1\frac{3}{8} \times \frac{1}{4}$ inch; surface smooth generally; on section a few marginal follicles are seen. (2) Left appendages: tube short, $2\frac{1}{2}$ inches, somewhat thicker than the right. Mesosalpinx thin; parovarium very small, not so vascular, but from its base and from anterior surface of mesosalpinx a very attenuated thread-like stalk spring $1\frac{1}{2}$ inches in length, terminating in a hydatid as on right side. Ovarian sac marked. Ovary more rounded, surface not so smooth as right; a few marginal follicles seen on section. Ovarian ligament short and thick. Uterus $2 \times 1\frac{1}{2}$ inches externally; on section some watery fluid in cavity of uterus proper. Mucoid secretion in cervical canal.

Microscopic Appearances.—Tube (left) near ampulla × 90: the factors of the wall, including the complicated mucosal folds, are well formed. The epithelium of the last is in the main perfect. Right ovary × 90. Follicles are abundant, though small and accumulated in clusters. Some of the clusters are isolated from their neighbours by comparatively less cellular tissue. The blood-vessel walls are well marked. Here and there patches irregularly distributed of comparatively non-cellular tissue are seen. In the interval between the nuclei of these patches no definite structure is traceable. Uterus × 90: the mucosal and other coats are well formed. The epithelium of the glands is normal.

6. E. H—, æt. 61. Single. Domestic, suffering from melancholia which followed influenza. Refused food and very depressed.

Post-mortem. Naked-eye Appearances.—Right appendages: tube 6 inches; thin, fimbriated end well developed. Mesosalpinx healthy; parovarium faint. Ovary elongated, $2 \times \frac{1}{4}$ inch; surface smooth, on section inner third is pale and atrophied. Left appendages: tube 3 inches; fimbriæ well marked, a few cysts similar to opposite side. Mesosalpinx: a small pedunculated hydatid springs from the anterior surface of outer portion. Parovarium more distinct than right. Ovary elongated, $1\frac{1}{2} \times \frac{1}{2}$ inch, surface smooth; on section tissue pale, but not so pale as opposite side. Uterus $2\frac{1}{2} \times 1\frac{1}{2}$ inches, of fair bulk; on section a glairy white yellow secretion occupies cavity of cervix, and a more watery turbid fluid is present in small quantity in corpus.

Microscopic Appearances.—Uterus × 90 : the glands show decided catarrhal change, and there is a considerable amount of leucocytosis in the mucosal interstitial tissue. In the muscular layers is some endarteritis obliterans. Tube × 90. The vessels are engorged, and their lumens in some cases distended. The type of tubal epithelium is degraded into cubical epithelium at many parts. The ciliæ are at many parts with difficulty detected. Columnar epithelium is, however, seen in many parts, though frequently there is a double layer, the subjacent layer being of irregular formation. At other parts there is but a single layer of low columnar epithelium, the regularity of which is interrupted by subjacent oval and rounded large cells, apparently of inflammatory origin. Ovary : vessel walls thickened ; several degenerated follicles are seen, *i. e.* degenerated in the direction of being filled with inflammatory products. No follicles of typical healthy structure are detected. Large areas of structureless material slightly stained, and interpolated between the tissues of the organ, are present.

7. H. C—, æt. 71. Suffering from senile dementia. Widow. Has had paralytic attacks for twelve years. Epithelioma of vulva. Right appendages : tube $2\frac{3}{4}$ inches ; several small simple broad ligament cysts, small shot size, in region of ampulla. Mesosalpinx : parovarium faint, healthy ; there is a small pedunculated hydatid from anterior outer portion. Ovary elongated, $1\frac{3}{8}$ cystic at outer end, measuring here $\frac{1}{2}$ inch transversely. On section the ovarian tissue appears to extend for some distance into the ovarian ligament. The cystic condition at the outer part of the ovary is unilocular, and appears to have been the result of distension of a follicle. The cystic fluid is clear, watery, and straw-coloured. Left appendages : tube 3 inches, appears somewhat contorted and elongated towards the outer end, and somewhat thickened. Mesosalpinx : parovarium indistinct, a few small cysts towards the outer portion ; a small pedunculated hydatid springs from the anterior and outer portion. Ovary : small and atrophied, surface smooth, 1 × $\frac{1}{4}$ inch ; ovarian tissue does not appear to extend to same degree into ovarian ligament as on opposite side Uterus $2\frac{1}{2}$ × 2 inches. On section, cervical canal contains starch-like substance. Uterine cavity contains blood-clot and sanious *débris ;* the mucosa is deeply ecchymosed generally.

Microscopic Appearances.—Ovary × 90 : many of the vessels

are engorged, and in some cases there is parietal thickening amounting in one or two instances to luminal obliteration. Some partially obliterated follicles of atypical structure are accumulated in irregular groups. The structure of the organ in some places is suggestive of myxomatous change. Uterus × 90 : mucosa is destroyed in many places by ultra-glandular and interstitial blood effusion, whilst the muscular coat shows degeneration from the same cause, and also there is some degree of leucocytosis in the portion of the uterine wall.

8. M. A. F—, æt. 48. Widow. Suffering from melancholia and dementia. Suicidal, alcoholic, masturbates, hypertrophy of nymphæ.

Post-mortem. Naked-eye Appearances.—Right appendages : tube 3½ inches, thickened considerably in its outer third and lengthened ; its mucosa is also here hypertrophied. On the dorsum of outer part of tube within ½ inch of fimbriated end a fimbriated stalk springs. The length of the latter is 1 inch. Fimbriæ round the abdominal ostium are well marked. Mesosalpinx normal ; parovarium distinct. Ovary of normal size and structure ; a recent ruptured follicle is present at this outer pole. Left appendages : tube 4 inches ; also somewhat thickened in its outer third, though not to the same extent as opposite side. Mesosalpinx normal ; parovarium very distinct. Ovary normal size and structure. Both ovaries on section show network-like mottling of red and white, the red appearing to map off in mesh-like fashion the enclosed white areas. Uterus = 2½ × 1½ inches. At right upper posterior portion of fundus there are three pedunculated fibroids of pea size. The pedicles are less than ¼ inch in length. On section nothing abnormal is visible. Arbor vitæ in cervical canal is well marked.

Microscopic Appearances.—Right tube × 90 : a large portion of the tubal structure is destroyed by hæmorrhage. Catarrhal changes and leucocytosis are present in the mucosal ridges. Uterus × 90: many of the glands are imperfect in structure, and there is no noteworthy change in the muscular coats. Ovary × 90 : tunica albuginea is well marked, and its component structures are delicately outlined. Towards the central portion of the organ some large spaces are visible, filled with a structureless material (corpora lutea ?). Follicles are present in some number, some well defined, the majority irregular in outline and structureless in contents.

9. A. D—, æt. 30. Married. Suffering from chronic melancholia. Suicidal, alcoholic, of immoral habits, been living with a man, no children, syphilitic. Had occasional severe fits, nature uncertain, always abusive and noisy.

Post-mortem. Naked-eye Appearances.—Right appendages: tube 5 inches; general size normal; fimbriæ not well marked. Mesosalpinx broad. The ovarian fimbriæ $2\frac{1}{2}$ inches long, the proximal half of it cord-like, and shows no groove; parovarian tubes faintly marked. Ovary bulky and soft, surface somewhat smooth, $1\frac{1}{2} \times 1$ inch. On section the tissue is seen to be soft and œdematous, and there are three distended follicles of small marble size: at the margin these contain clear straw-coloured fluid; corpus-luteal remains are seen. Left appendages are irregularly matted as a whole by the inflammatory process. Tube 4 inches, contorted, somewhat thickened, and hard. Fimbriated end of irregular shape. The abdominal ostium is much distended, admitting a lead pencil. The os has evidently been separated from an adjacent viscus in the process of post-mortem manipulation. Mesosalpinx thickened and partially obliterated; parovarium not recognisable. Ovary is matted to the broad ligament, and has been mutilated by post-mortem manipulation. It appears to have been of somewhat bulky dimensions; its tissue is firmer than that of the other side, and on section three small white points of shot size are seen there, still harder than the surrounding tissue, and appear to be exsanguine. Uterus = $2\frac{3}{4} \times 1\frac{3}{4}$ inches. On section nothing abnormal is detected.

Microscopic Appearances × 90 and × 690.—Nothing special to note.

10. C. H—, æt. 61. Single, suffering from mania with epilepsy. Alcoholic and immoral, three months insane.

Post-mortem. Naked-eye Appearances.—(1) Right appendages: tube $3\frac{1}{2}$ inches, somewhat thickened; an inch from the abdominal ostium proper there is an accessory ostium with well-developed fimbriæ, and the distal and proximal portions of the tube involved are represented by two distinct apertures. Mesosalpinx normal in size. Ovary normal size and contour; on section no corpus luteum is seen. (2) Left appendages: tube 4 inches; outer inch is twice thickened and contorted (see microscopic examination). Mesosalpinx shows a small intra-ligamentous cyst of pea size and shape; contents are albu-

minous fluid, and the cyst is evidently developed from one of the vertical tubules of the parovarium. Ovary normal size and contour; on section luteal remains are seen, but no ripe follicles. (3) Uterus 3 × 2 inches; appears normal.

Microscopic Appearances.—Left ovary × 90: tunica albuginea distinct; remains of follicles are seen deeply set in the organ; vessel walls are thickened. Left tube × 90: blood-vessels enlarged and engorged; mucosal fronds are considerably multiplied, and their epithelium is irregular and in many places being shed; the connective tissue of fronds is also thickened, and there is leucocytosis. Uterus × 90: mucosal and other layers appear normal.

11. F. A. E—, æt. 28. Single. Suffering from melancholia. Insane for one year.

Post-mortem. Naked-eye Appearances. — (1) Right appendages: tube much elongated; the outer two inches are transformed into a cyst of Tangerine size and shape, nature of fluid it contained not ascertained; within the cyst the fimbriæ of the proximal portion of the tube are seen spreading out, and gradually disappearing over the inner surface of the attenuated walls. There are no inflammatory adhesion sites on the tube or cysts, and during life it would seem to have been a pedunculated floating cyst; two hydatids spring from the anterior inner margin of the cyst. Mesosalpinx: parovarium is unusually well marked, and has no relation whatever to the cyst. Ovary $\frac{3}{4}$ × $\frac{1}{2}$ inch, and on section shows a ripe follicle of shot size. (2) Left appendages have been mutilated in removal. Tube portion present $2\frac{1}{2}$ inches in length, and is thrice thickened; the outer portion of the tube is not distinctly traceable, but appears to terminate in a condition analogous to that affecting the other side; the walls of the cyst are much thicker, however. Ovary is not traceable. (3) Uterus 2 × 1 inch; walls thinned; the utero-vesical pouch has been obliterated by the mutual inflammatory adhesion of the peritoneum on the anterior surface of uterus, and that on the posterior surface of bladder; mucosa is unhealthy, is thinned and anæmic.

Microscopic Appearances.—Right ovary × 90: the tunica albuginea is thickened; follicles irregularly accumulated and of irregular shape; membrana granulosum is irregularly multiplied; so irregular are some of the follicles in shape, and so irregular their aggregation, that in these cases where the membrana

granulosum has multiplied so far as to fill the follicles with compressed cell elements the structure has the appearance of a scirrhous cancer. Uterus × 90 : the elements of the walls seem thickened and are hypertrophied, and do not stain well. Left tube × 90 : all the elements of the wall are infiltrated with inflammatory exudations, and in the cross-section of the tube the remnants of the lumens appear as some ten or so irregularly shaped cavities, lined by disorganised epithelium ; the muscular layers are unrecognisable.

12. R. J. B—, æt. 68. Widow. Suffering from senile dementia ; duration some years.

Post-mortem. Naked-eye Appearances. — (1) Right appendages : tube 3 inches ; appears normal, slender ; a small tuft of fimbriæ on a slender stalk springs from a point on the upper surface of the tube within ½ inch from the ostium ; calibre and structure of the tube appear normal. Mesosalpinx : there is a fairly well-marked ovarian sac ; parovarium distinct. Ovary 1¼ × ¾ inch ; structure and configuration appear normal ; on section some ripe marginal follicles are seen, and the remains of a corpus luteum. Left appendages : tube 4 inches, normal. Mesosalpinx : ovarian sac not so marked, nor is the parovarium so distinct as on the right side. Ovary 1½ × ½ inch ; structure and configuration appear normal, and on section one or two small marginal follicles are seen. Uterus 1¾ × 1½ inches ; plug of clear mucus in cervix ; mucosa pale.

Microscopic Appearances.—Uterus × 90 : tubular structure of mucosa atrophied, vessel walls thick, muscular layers not easily differentiable from each other. Ovary × 90 : "germinal" layer is still well represented, in parts being well seen in the dips of the simple surface corrugations ; there are no follicle remnants near the surface of the organ, but deeper, many of them are irregularly accumulated, some few showing the kidney shape noted in some previous sections.

13. A. R—, æt. 75. Widow. Suffering from chronic mania for eleven years.

Post-mortem. Naked-eye Appearances. — (1) Right appendages : tube 3 inches, of small calibre. Mesosalpinx : ovarian sac well marked ; parovarium small ; in the centre of the mesosalpinx there is a small nodule of pea size within the layers of the broad ligament ; this nodule is composed of hard blood-

clot, and a calcified rounded nodule of gun-shot size; this condition is probably the sequel of a simple broad ligament cyst. Right ovary is small, and contains two corpora lutea. (2) Right appendages: tube 4 inches, also of small calibre. Mesosalpinx: ovarian sac well marked; parovarium small, and situate as on the other side in the outer angle of the sac; a small nodule is present of fibrous tenure and pea size in the peritoneum immediately anterior to the ovarian fimbria. Left ovary very small, elliptical in shape, and is comparatively smooth, and contains two corpora lutea. (3) Uterus 3 × 1⅞ inches: somewhat thin-walled; mucosa of corpus is soft and hæmorrhagic, that of cervix is not so soft, and is not hæmorrhagic.

Microscopic Appearances.—Uterus × 90: in the outer half of the wall the vessel lumina are numerous, and their walls are extraordinarily thickened, enclosing little if any blood; in the inner half of the wall the tissue is mainly composed of a network of engorged blood-spaces, though here too at many points the vessels are much thickened, thickening being apparently due in the main to an inflammatory exudation amongst the wall elements. There is marked leucocytosis at parts; little if any typical gland structure is present.

14. M. A. A—, æt. 68. Widow. Suffering from chronic mania for ten years, noisy, delusional, and abusive.

Post-mortem. Naked-eye Appearances. — (1) Right appendages: tube 2½ inches, contorted within the peritoneum; fimbriæ abundant. Mesosalpinx: thickened, and shows a small ovarian sac; parovarium not recognisable. The ovary is very small, ½ × ⅜ inch, and has a perfectly smooth surface; on section the tissue appears practically barren. (2) Left appendages: tube 3 inches; arched from adhesion and contraction of ovary; appears normal; fimbriæ free and luxuriant. Mesosalpinx also somewhat thickened. Ovary is adherent by its upper surface in the ovarian sac; parovarium is indistinct; ovary is also small, smooth surface, and apparently barren tissue. (3) Uterus 2⅔ × 1½ inches; there is a small fibroid subperitoneal nodule, partially pedunculated at the upper posterior part of fundus; on section this nodule is seen to be partially calcified; the uterine cavity is filled with blood, though not distended with blood-clot; mucosa is generally smooth; the small pits of gland mouths are evident. There is, however, a

roughened portion of mucosa at the middle of posterior wall ; this may possibly account for the hæmorrhage : the microscopic section of corpus is from this region.

Microscopic Appearances.—Uterus × 90 : nothing unusual is noticeable in the muscular coat. Superficial ulceration is noticeable, with thickening of the portion which might represent the edge of the ulcer. Underneath the ulcerated portion the glandular arrangement is very irregular and contorted. The glands to the side of the ulceration are in the main healthy, their lining epithelium being tall, luxuriant, ciliated epithelium, with slight catarrhal changes here and there. In other glands, again, some large round-cells are noticeable, breaking up the regularity of the lining epithelium. Tracts of submucosal hæmorrhage are noticeable here and there. Ovary × 90 (apparently barren to naked eye) : the sites of atrophied follicles are readily seen ; an ovum, however, is detected in the centre of an irregularly shaped follicle at some distance from the surface of the organ ; it is surrounded by an undifferentiated material filling the remainder of the follicle.

15. R. S—, married. Suffered from chronic mania for some years past.

Post-mortem. Naked-eye Appearances. — (1) Right appendages : tube 4 inches, arched round the ovary in its outer half, its fimbrial end being adherent to that organ ; its outer end is also somewhat thickened. Mesosalpinx partially adherent to ovary. On dissection the parovarium is faintly seen. Ovary superficially matted on both surfaces of broad ligament. On section irregular aggregations of small follicles are observable. (2) Left appendages : tube $3\frac{1}{2}$ inches, of very fine calibre, outer end somewhat thickened and fimbriæ agglutinated. Mesosalpinx : thin, parovarium barely seen. Ovary smooth and atrophied, × $\frac{1}{4}$ inch. Uterus $2\frac{1}{2}$ × $1\frac{1}{2}$ inches ; walls thinned ; mucosa of corpus is softened, breaking down. That lining the anterior wall is in a softened polypoid condition, one of the polypi being the size of a pea. The structure to the naked eye is suggestive of an adenomatous process. This polypus and the portion of the uterine wall from which it springs are reserved for microscopic examination.

Microscopic Appearances.—Right tube × 90 : mucosal fronds are much thickened, inflammatorily infiltrated and very vascular ;

at some few points columnar epithelium is retained ; in the main, however, it is shed, and an inflammatory exudation occupies the recesses of the mucosa. Mesosalpinx is also much infiltrated with inflammatory matter. Uterus × 90 (cystic pus of mucosa) : subjacent to the polypus and also at the side the uterine glands are dilated, and filled in some instances with structureless effusion. The unilocular cystic polypus itself (see naked-eye examination) appears to be but an exaggeration of the condition in one or two adjacent glands, their proximate walls breaking down to form this comparatively large cavity. The lining epithelium is one, two, or three layered, and composed for the most part of cells of a degraded columnar type. The wall of the cyst is very vascular.

16. A. H—, æt. 60. Suffering from chronic mania ; duration some years.

Post-mortem. Naked-eye Appearances. — (1) Right appendages : tube 5 inches, and appears normal. Mesosalpinx shows some intra-ligamentous hæmorrhage towards the hilum of ovary ; parovarium very faint. Ovary atrophied, smooth surface, $1\frac{1}{2} \times \frac{3}{8}$ inches ; the ovarian tissue extends for $\frac{1}{2}$ inch into the ligament. These are apparently derived from the tunica albuginea. (2) Left appendages : tube 4 inches, somewhat thickened at the ampullary portion, and its lumen is somewhat patent on section. Mesosalpinx : there is a well-marked ovarian sac, and, as appears to be general in these cases, the parovarium is found towards the outer angle of sac. The ovarian fimbria of the tube joins the ovary on its posterior border at the junction of its outer and middle third. It is probable that this ovarian sac is caused by inflammatory adhesion involving the posterior border of ovary, and a portion of the mesosalpinx above the level of the hilum. Ovary : atrophied surface is smooth, $1\frac{1}{4} \times \frac{1}{2}$ inch ; as on the other side, though to a less extent, the superficial layers of the ovary extend into the round ligament. Uterus elongated = $3\frac{1}{2} \times 1\frac{1}{2}$ inches ; cervix hypertrophied. There is a subserous calcareous nodule (calcified fibroid) in the left interior portions of the fundus. On section the tissue of the hypertrophied cervix shows considerable pallor. There appears to be nothing specially noteworthy in the tissues of corpus uteri.

Microscopic Appearances.—Left tube × 90 : blood-vessels of

the walls are numerous and engorged, muscular layers not differentiable. The mucosal fronds are thickened irregularly, and for the most part wanting in epithelium. Hypertrophied cervix. The squamous epithelium of the surface is markedly developed. Surface "pittings" are present, and the superficial layers of the squamous epithelium are traceable round their walls; in one or two instances the overhanging edges of these "pits" meet, and suggest a mode of superficial cyst formation. The stratum lucidum of the squamous epithelium is especially well marked at some parts. For the rest, the section shows an irregular hypertrophy of the ordinary cervical factors. Catarrhal changes are present in the mucous glands of the cervix.

17. I. L—, æt. 70. Single. Chronic mania of considerable duration.

Post-mortem Appearances. — Right appendages: tube 5 inches, very small in calibre. Mesosalpinx partially usurped by a very thin-walled cyst, developed probably from one of the parovarial tubules. The cyst is of Tangerine size, and contains straw-coloured non-albuminous fluid amounting in quantity to some drachms. Ovary 1 × ½ inch, smooth on surface and pale on section. Left appendages: tube 4 inches, very thin except at ampulla, where it is comparatively thicker. Mesosalpinx somewhat thickened and contracted. Ovary 1¼ × ¼ inch: elongated, almost cord-like in form; smooth on surface. Uterus 2 × 1½ inches: a plug of viscid mucus occupies the cervical canal, and a blood-stained less viscid mucoid material separates the walls of the corpus. The arbor vitæ is well marked in the cervical canal (see microscopic section).

Microscopic Appearances.—Cervix × 90: some little distance beneath the mucous surface irregular areas of hæmorrhage are seen.

18. E. O'N—, æt. 39. Single. Suffering from melancholia. Duration one year.

Post-mortem. Naked-eye Appearances. — Right appendages: tube 4 inches, and is normal. Mesosalpinx normal; parovarium is distinct, the convoluted character of its tubules being well marked. Ovary 1½ × ½ inch. The breadth of the ovary increases distally; surface smooth on section. There is some mottling seen, due to the presence of dark green yellow spots in some of the follicles; this coloration is doubtless due to

the deposit of the blood-colouring matter from the hæmorrhages into the follicles. Left appendages: tube 3½ inches, normal. Mesosalpinx congested; in its outer half is some ecchymosis; there is also some intra-ligamentous blood effusion close to the hilum of the ovary; the ovarian sac is well marked. Left ovary 1 × ½ inch; smooth on surface and mottled on section in same manner as organ on right side; the ovarian ligament is attached to the inner end of the posterior border at a point which appears to cause strain on the mesosalpinx, and a "pitting" resulting in the formation of the ovarian sac referred to. Uterus 1½ × 2½ inches; on section nothing noteworthy is found.

Microscopic Appearances.—Uterus × 90: catarrhal changes are present in the mucosa glands of the cervix. Elongated ovary × 90: superficially the tunica albuginea and the connective tissue of the organ subjacent to this are increased in density. Towards the centre of the organ follicles in various stages of degeneration are present. In the case of those which are almost obliterated concentric arrangement of the tissue causing such obliteration is noticeable; a degenerated ovum is seen here and there within these ill-formed follicles.

SUMMARY A (Special to Insane).—(1) Case 12. Kidney shape of atrophied follicles. (2) Comparative anæmia of the follicular tissues. (3) Case 8. Peculiar mottled condition of the ovary, with hyperæmia and stromal hæmorrhage of tubes, in notorious masturbator.

SUMMARY B (General).—(1) Case 11. Chronic salpingitis. (2) Case 14? Early stage of malignant disease. (3) Case 14. A well-formed follicle containing an ovum in the ovary of a woman of sixty-eight. (4) Case 15. Development of cystic polypus from the utricular glands. (5) A. Case 16. Possible development of cervical cyst from invagination of the squamous epithelium of vaginal portions. (5) B. Case 4. Development of cervical cyst with its subsequent suppuration from dilation of cervical canal. (6) Average length of right and left tubes. In eight cases out of eighteen the right tube is longer than the left tube. (7) In senile ovaries the aggregation of thickened vessels, apparently in the site of old corpora lutea; these may be readily mistaken for follicles with fibrous change round them. (8) In Case 3 (also in Case 9) the immunity from specific change in the uterus and appendages in a patient who died from

acquired syphilitic disease of the brain. (9) Case 4. Uterine stone of marble size, probably from calcification of corpus luteum. (10) Case 7. With a condition of vulvar cancer nothing more may be noticeable in the condition of the internal organs of generation than mucosal hyperæmia. (11) Case 12. Semblance of the histology of scirrhous cancer in centre of an ovary by the multiplication of membrana granulosum in closely adjacent follicles, partitioned off from each other by fibrous stroma. (12) Hydatids. Pedunculated hydatids spring in almost all cases from the anterior outer portion of the mesosalpinx, and have a close relation to either the parovarium or the fimbriated end of the tube. (13) The parovarium is appreciably more prominent in the anterior than the posterior surface of the mesosalpinx. (14) The adventitious formation of the ovarian sac as seen in Cases 5, 13, 14, and 18. The sac appears to be due to the mutual inflammatory adhesion between the upper outer portions of the ovary and the mesosalpinx close upon the parovarium: the ovarian ligament being tense, the result is the formation of a deep pocket, which has to be distinguished from the congenital non-inflammatory and true ovarian sac.

On the Treatment of Insanity by Thyroid. By Jas. Middlemass, M.D., F.R.C.P.E., Medical Superintendent, Sunderland Borough Asylum.

It is now about four years since Drs. Bruce and Macphail first published the results of their treatment of cases of insanity by thyroid, and since then the new drug has been used very extensively in the Royal Edinburgh Asylum. Dr. Bruce has published the results of his further experience there, and though they are not quite so encouraging as those first carried out at Derby they have furnished several remarkable cures, and have shown conclusively that in thyroid we have a decided addition to our means of treatment.

This paper contains a short account of the treatment of a number of cases in the Edinburgh Asylum which were under my more immediate care, and as it may still be considered in

the experimental stage I have thought it would be of interest and utility to add to our knowledge of it, more especially as we are met so near the place where it was first tried.

Before the treatment was commenced each patient was carefully examined as to his physical condition. We already know that thyroid exercises a most prejudicial influence on phthisical processes, acting in fact very much like Koch's original tuberculin. It is therefore necessary to exclude from thyroid treatment all patients who have the slightest evidence of even latent phthisis. Organic disease of the heart is also prejudicially affected by thyroid, and though it does not altogether prohibit its use it necessitates great care in administration. Disorder of digestion is also apt to be set up in a few cases, and may require special attention. With care in diet it ought to be easily overcome. It is well known that, even apart from any digestive disturbance which it may cause, thyroid effects a pretty rapid loss in weight from increased metabolism, and therefore it is distinctly inadvisable to give it to any patient who is in an emaciated condition, unless the dosage be small. Apart from these exceptions, it may confidently be stated that no patient is in danger of being made worse, either physically or mentally, by a course of thyroid.

In the majority of cases the dosage consisted of four tabloids of the dried preparation of the gland given thrice daily, this being equivalent to 60 grains per diem. This was continued for six days as a rule, but it was also given for a longer or shorter time in a few cases, as circumstances seemed to indicate that this was advisable. The patient was kept in bed during the whole time the drug was given, and for some days afterwards.

These preliminaries being mentioned, I may now proceed to give an account of the results of treatment in individual cases, especially of those which showed a remarkable improvement. In some this amounted to a practical cure.

Undoubtedly the most striking case was that of Miss S—. It occurred amongst the first of those in whom this treatment was tried, and unquestionably it strongly influenced us to persevere with it in every case which seemed at all likely to be benefited. She was admitted in April, 1895, suffering from an attack of excitement which came on during the course of adolescent insanity, which had been in existence for two years.

Mental symptoms first manifested themselves at the age of twenty-one, when she became confused and stuporose, with occasional attacks of restlessness and impulsiveness. She was put in charge of skilled nurses, and subjected to the best conditions and treatment that her doctor and her relatives could give her, but apart from slight improvements, followed by relapses to her previous mental condition, there was no substantial advance towards recovery. As already stated, she became rather acutely excited, and had to be brought to the asylum in consequence. For some time after her admission this excitement continued, though it was never very great, and when it passed off she was in a condition which appeared to indicate that secondary dementia was imminent. All the usual means of treatment were had recourse to in an endeavour to ward off this undesirable result, but with only partial success. She was very apathetic, seldom spoke unless when spoken to, and not always even then, and her answers to questions were apparently purely reflex. She had little or no initiative, never did anything unless told to do so, except go to bed, which she was always ready to do, seldom occupied herself, and the work she did was always of the simplest kind. Altogether she was more like a baby than a full-grown person. Occasionally she had little turns of excitement, during which she was inclined to strike and to break dishes. These conditions lasted with little change for six months, and as there was no prospect of any material change it was decided to put her under treatment with thyroid. This was done in November, 1895. The dose was about 45 grains a day, and this was continued for seven days. The physical reaction was quite distinct. The temperature and pulse indicated the effects of the drug in a most marked way. The temperature rose fully three degrees, and the pulse-rate over twenty per minute, and these changes were evident to a greater or less degree during the whole time the drug was given, and for a day or two longer as well. No mental change was visible for the first four days, but on the fifth she appeared to be a little restless, more inclined to speak, and more observant of what was going on around her. She did not sleep so well also. When the fever passed away and she began to go about again the improvement was more noticeable. She lost a considerable amount of her apathy, began to talk a little of her own accord, and her replies to questions were less mechanical.

She began to take an interest in what was going on, and then to ask questions about her surroundings. A few weeks later the improvement became still more evident. She seemed to have forgotten entirely the events of the previous two and a half years, and had to undergo a gradual process of education so far as that period of her life was concerned. She had to learn the names of persons she had seen daily for six months before, but had apparently never noted. Her expression of face, which formerly had been vacant or silly, became intelligent and alert. Physically there was also an improvement. Her weight, which had gone down 9 lbs., now began to increase ; her skin became clearer and more healthy-looking, and her hair less dry and stiff. She was still somewhat childish in her conversation and conduct, but this was evidently undergoing a daily improvement. About two months after the treatment she had a slight relapse, and became hysterical and emotional, eccentric and foolish ; but this passed off in a week or two, and her improvement then went on uninterruptedly. She was discharged in March, 1896. At that time her mother said she was more intelligent and brighter than she had ever been in her life, and the contrast between her condition then and a year before was sufficiently striking to one who had seen her at both times. Since then she has kept well, and is now filling her place in society like any other sane person.

Another interesting case of cure, that of Miss J. H. C—, presents several features in contrast to that already described. She was admitted in September, 1896, suffering from an attack of adolescent insanity which had been in progress for a little over a year. She was then twenty-six years of age. At the onset of the attack she had been depressed and agitated, with melancholic delusions, chiefly of a religious character. For a time the depression increased, and she got restless and excited as well. After some months the depression diminished, but the excitement got worse, and she became most troublesome, being violent, noisy, destructive, and most difficult to manage. She was sent to an asylum, and while there she improved so much that at one time she was nearly well. She relapsed, however, and after some months, during which she became worse than ever, she was transferred to Morningside. She came with a very bad reputation, and quite lived up to it. She was usually morose, taciturn, idle, and lazy,

but every now and again without any apparent cause she became excited, shouted, threw the furniture about, struck, bit, and spat upon the nurses if they came near her, and altogether was in a typical state of furious mania. At times she was somewhat more rational, and would answer questions as if she were well pleased with herself. There was seldom any evidence of mental depression. Various measures were tried to bring about some improvement, but they were only very partially successful. She gained some weight and her appetite improved, but the attacks of violence and excitement still occurred. In April, 1897, it was resolved to give her thyroid. Sixty grains were given for six days, but to all appearance there was no reaction whatever. The temperature did not rise above 99·2° F., and the pulse remained practically the same. There was, however, a considerable physical change induced, as she became much thinner and was very weak for a time. Her digestion was feeble, and remained so for a week or two. In a month her physical state began to mend, and it was only then that for the first time signs of some mental change began to be apparent. She became quieter, and the attacks of excitement less frequent and violent. She was still morose, taciturn, and idle, but seemed to be more observant. As time went on the improvement also advanced. She began to talk more freely and quite rationally, though her memory was not very good, and she was depressed and slightly stuporose. She did not remember anything of her illness, and took some time to grasp her surroundings and the course of events. Thereafter her progress continued uninterrupted until she was practically quite well. Even at her best, however, it is questionable if she was quite the same as she had been before her illness. This is hardly to be wondered at considering the severity of her attack and the length of time it lasted. She kept well for several months, and then she had a slight relapse, becoming sleepless, rather restless, and more moody.

These two cases show in a sufficiently striking manner the different ways in which thyroid affects different people, both as regards the physical reaction produced and the mental changes which led up finally to recovery. It would be both tedious and unnecessary to enter so fully as has been done in these two cases into the particulars of all the others. It will suffice to present the results in tabular form.

No.	Sex.	Age.	Mental disease.	Dose.	Days.	Reaction.	Highest temp.	Highest pulse.	Result.
				Grs					
1	F.	47	Suic. melan.	420	7	Decided	99·4	128	Slight improvement.
2	F.	28	Stup. melan.	540	9	,,	100·0	110	Decided improvement.
,,	F.	28	,,	420	7	Moderate	99·8	112	Decided improvement.
3	M.	30	,,	540	9	Slight	98·6	108	Recovery.
4	F.	43	Exc. melan.	600	10	Moderate	99·8	120	Decided improvement (temporary).
5	F.	34	Del. melan.	480	8	,,	99·6	110	Slight improvement.
6	F.	24	Stup. melan.	310	7	Very decided	100·2	98	Recovery.
7	M.	27	Si. mania	360	6	Slight	99·0	92	No change.
8	M.	31	Chr. mania	420	7	Moderate	99·2	124	No change.
9	F.	45	Stup. melan.	360	7	Slight	98·8	120	Distinct improvement.
10	F.	26	,,	240	5	,,	99·0	108	Distinct improvement (temporary).
11	F.	24	,,	300	5	,,	99·0	124	Slight improvement (temporary).
12	F.	47	,,	240	4	Decided	100·0	112	Slight improvement.
,,	F.	49	,,	360	6	Moderate	100·0	112	Slight improvement.
,,	F.	50	,,	900	60	None	Normal		Decided improvement.
13	F.	21	,,	360	6	Decided	100·0	110	Slight improvement.
14	M.	27	,,	360	6	,,	100·0	116	No change.
15	M.	27	Del. melan.	360	6	Slight	99·0	100	Slight improvement.
,,	M.	28	,,	540	9	,,	99·0	104	Slight improvement.
16	F.	43	,,	360	6	Moderate	100·0	112	Decided improvement.
17	F.	52	Hyp. melan.	240	4	Slight	99·0	86	Practically recovered.
18	F.	36	Suic. melan.	315	7	Moderate	99·6	110	Slight improvement.
,,	F.	36	,,	360	8	,,	99·6	96	Slight improvement.
19	F.	35	Si. melan.	210	6	,,	100·0	104	Recovery.
20	F.	28	Ac. mania	360	6	Slight	99·2	92	Recovery.
21	F.	46	Stup. melan.	270	6	Decided	100·4	100	Decided improvement.
22	F.	31	,,	525	35	None	Normal		Recovery.
23	F.	28	Del. melan.	960	64	,,	Normal		Decided improvement.
24	M.	20	Stup. melan.	420	7	Slight	99·8	106	No change.
25	F.	35	Del. melan.	335	7	Moderate	99·8	120	Decided improvement.
26	F.	28	Exc. melan.	360	6	,,	99·4	110	Almost recovered.
27	M.	52	Suic. melan.	360	6	Slight	99·2	96	No change.
28	F.	34	Si. melan.	240	4	Moderate	99·6	90	Recovery.
29	F.	39	Suic. melan.	360	6	Decided	99·6	110	Decided improvement.
30	F.	30	Exc. melan.	360	6	Slight	99·0	106	Slight improvement.
31	F.	37	Si. melan.	360	6	Moderate	99·6	116	Decided improvement.
32	F.	35	Res. melan.	570	11	Decided	99·8	108	Decided improvement (temporary).
33	F.	45	Si. melan.	555	9	Slight	99·0	106	No change.
34	F.	61	,,	360	6	Decided	100·2	112	Decided improvement.

The results contained in this table may be summarised by themselves as follows :

		Recov.	Decid. impr.	Slightly impr.	No change.
Males	8	1	0	2	5
Females	31	5	16	9	1
Total	39	6	16	11	6

An investigation of the results produced by the action of thyroid in these thirty-nine cases renders it possible to draw

certain conclusions. It will be convenient to take up first of all the physical effects. It is very clearly proved that the thyroid gland contains a substance which is capable of exerting a very distinct physical influence. In view of many different experiments it is almost certainly proved that this substance is identical with the colloid material visible in microscopic sections of the gland. It has been named iodothyrin. Every case in which thyroid was given in the above series showed some reaction, though the degree varied much in different individuals. In most the reaction is evidenced by a rise of temperature, which in some may amount to as much as 4° F., but which is usually less, between 2° and 3°. In one or two exceptional cases it may be very slight. Dr. Bruce has already shown the influence of surrounding conditions of temperature in the reaction. This seems to point not only to an increased heat production but to a disturbance of heat regulation, as both combine to affect the temperature.

Besides this effect, thyroid also produces a marked influence on the pulse, both in its rate and its character. In all the above cases this change was constant, though its amount varied. In most of them the rate was considerably increased, but the more constant change was one affecting its strength and volume, both of which were diminished. As this change in the pulse is apparently more constant, and is a source of greater danger than any rise of temperature is likely to be, it follows that the pulse is a much better guide than the temperature in estimating the effect of thyroid, and in judging when it has been pushed far enough. There is another difference in the way in which thyroid affects the temperature and pulse respectively. This consists in the fact that the temperature ceases to be affected after a few days, usually six or seven, while the pulse continues to be affected so long as the drug is given. In the case of the latter also the effect is cumulative, so that for this additional reason the pulse ought always to be carefully investigated so long as thyroid is being administered.

A study of the reaction in the various cases shows what had indeed been already ascertained as regards the dosage and period of administration which is likely to produce the best results. The usual amount given was sixty grains, continued for six days. In some which recovered a less dosage than this sufficed to effect a cure, and it is always open to conjecture whether a

case which recovers would not have done so with a less dosage than that stated. It is, however, certain that that amount can be safely given, and is most likely to effect the physical and mental changes desired. In three cases the plan was tried of giving small doses of fifteen grains daily for a prolonged period. It is hardly sound to draw conclusions from such slender facts, but it may be stated that one recovered (Case 22), and that the other two both showed decided improvement. In view of these facts it would be worth while making a further trial of this method, as it is unattended by any risk. It would also assist in settling the question as to whether the production of a marked physical reaction is really essential in the bringing about of a cure.

More than one case exhibits the necessity for care in examining the physical condition of the patient before the drug is given. As already stated this was recognised, and due care exercised, especially in the examination of the lungs. But it is often difficult to detect latent phthisical processes, and it will hardly be possible to exclude from thyroid treatment every case which has such a latent weakness. In the above series no case of cardiac complication occurred, while three developed lung symptoms. It is therefore necessary to examine the chest regularly, and to watch the temperature curve carefully.

In many cases thyroid also causes digestive disturbance. It is important to avoid this if possible, as there is considerable loss of weight from the drug alone, and disturbance of digestion interferes with the regaining of this when treatment has ceased. The recovery of weight lost seems to be an important element in bringing about a cure subsequently, though it is not absolutely essential. The best means to avoid gastric disturbance appears to be the giving of the drug in warm soup, beef tea, or bovril, and the placing of the patient on a light, easily digested diet. It appears undesirable to give thyroid to patients who are steadily losing weight, or who are badly nourished. In them it would be more desirable to try the effect of prolonged small doses.

I come now to consider the mental effects produced by the thyroid. It may at once be said that in almost every case some mental change was observed, though the degree of the change varied much in different cases. In many it exhibited a distinctly stimulating action, and this was particularly notice-

able in one or two. In most cases also there was a tendency towards the reproduction of the original mental symptoms. If, for instance, suicidal feelings had been present at the outset of the attack, they were frequently manifested once more during a course of thyroid. Such a fact obviously indicates the necessity for attention to mental symptoms during the treatment. It was also remarkable that in several cases the emotional condition underwent a complete transformation. Whether or not this was due to the stimulating action on the cortex already described it is impossible to say, as we are not yet able to define on what physical conditions the different emotional states depend.

As already stated, recovery followed in six cases out of thirty-four, but a careful study of these does not yet permit of any satisfactory explanation of how the thyroid really acts in bringing about this result. We do not yet know sufficient about the pathological conditions which constitute insanity, nor of the action of thyroid in modifying these, to be able to draw reliable conclusions. One thing, however, is almost certain, and that is that the beneficial effect of thyroid is altogether independent of the physical reaction produced, at least in so far as the temperature and pulse are concerned. These are certainly not the only physical effects which thyroid is capable of exerting, as we know that these may be very slightly affected, and yet the body weight may decrease rapidly. A more prolonged and searching investigation is obviously necessary before a full explanation is possible.

In spite of a fairly extensive use of thyroid it seems still impossible to foretell what the mental result of its use will be, or in what forms of mental disease it is most beneficial. Most of those treated suffered from melancholia in some form or other, and all of those who recovered, except one, laboured under this form of mental disease. As regards age, all of those who recovered were between twenty-four and thirty-five, which is the period in which recovery under other forms of treatment is most likely to occur. But if the ages of those who showed decided improvement be taken into account, this conclusion must be somewhat modified; and the experience of others tends in the same direction. It is also of interest to note that the female sex appears to be much more susceptible to benefit from thyroid treatment than the male. The table already

given brings this out clearly. The explanation, however, is still to seek.

Another interesting conclusion which may be drawn is that in very many cases a course of thyroid modifies the rapidity with which dementia progresses, even when a cure is not effected. Experience has abundantly shown that with proper precautions no case is made worse by the treatment. It seems, therefore, strongly advisable that no case should be allowed to become demented without a trial of thyroid being made. This brings us to another important point, which was drawn attention to by Dr. Bruce in his original paper, viz. the possibility of a course of thyroid being used as a diagnostic of the curability of any case of mental disease. At first it was not possible to be certain of this, but after four years' experience it appears that only one case out of two hundred known individually by me has recovered who did not do so after thyroid. Even this case is a doubtful one, as she had had thyroid only a few months before. If the above conclusion should prove to be true, a considerable step in advance in the way of prognosis will have been made.

The conclusions come to above may be summed up in the following propositions:

1. The thyroid gland contains one or more substances which, on administration, are capable of exerting a powerful influence on the system.

2. In most cases this is evidenced by a rise of temperature, which may reach as much as four degrees above the normal.

3. In a certain number of cases this rise of temperature is very slight or absent altogether.

4. It is at present impossible to predict in which cases the rise will occur, and in which it will be absent.

5. The surrounding conditions as to temperature to some extent influence the reaction.

6. The rate and character of the pulse are affected in every case of thyroid administration.

7. These changes consist in an increase of rate, and an initial increase followed by a decrease of volume of the pulse.

8. As this is of constant occurrence while rise of temperature is not, the effect on the pulse should be the main guide as to when sufficient thyroid has been given.

9. As the drug is cumulative, and is not rapidly excreted, care must be exercised not to push it too far.

10. As a rule the full beneficial effects are obtained by giving doses of 60 grains a day for six days, though in some less is sufficient, and in others 90 grains can be tolerated without ill effects.

11. In a few cases small doses given for a prolonged period seem to produce a sufficient reaction.

12. It is absolutely necessary in all cases before beginning treatment to make a careful physical examination of the lungs and heart.

13. In cases where phthisis is active, or even dormant, the giving of thyroid always increases the activity of the diseased process.

14. As thyroid also powerfully affects the heart, disease of that organ, especially such as causes irregularity of action, distinctly contra-indicates its use.

15. For the same reason, during administration of the larger doses the patient ought to be in bed, and remain there for a few days after it has been stopped.

16. Thyroid causes digestive disturbance, which can usually be avoided by giving it in warm (not hot) beef tea, and by placing the patient on light easily digested diet.

17. After the treatment has been stopped, tonics and extra diet may be given with beneficial results.

18. In a large majority of cases thyroid also has a distinct effect on the mental condition.

19. In many it has a distinctly stimulating action on the cerebral cortex.

20. In most cases there is a tendency towards the reproduction of the original mental symptoms.

21. The explanation of the action of thyroid in effecting recovery is still obscure.

22. It is quite clear that the beneficial effect is altogether independent of the temperature reaction.

23. Therefore the initial idea of the treatment, viz. the induction of a feverish condition, is not wholly justified by the results.

24. It is at present wholly impossible to say what the mental result of thyroid treatment will be.

25. It is equally impossible to say in what form of mental disease it will have a beneficial effect.

26. In the series of cases given, the ages of those who recovered were all between twenty-four and thirty-five, and all but one suffered from some form of melancholia.

27. The ages of those who showed decided improvement varied within much wider limits, and age does not seem to be the sole influence of the chances of recovery after thyroid any more than after any other form of treatment.

28. The female sex seems to be more susceptible to improvement after thyroid than the male.

29. The reason for this is still unknown.

30. Even in cases which are regarded as hopeless, thyroid often produces so great an improvement, that the degree of dementia is greatly lessened.

31. In no case was the treatment followed by prejudicial results, provided care was taken to eliminate those suffering from physical disease.

32. It is highly probable that thyroid furnishes a reliable diagnostic of the chances of recovery,—that is to say, if a patient does not improve under thyroid, the prospect of recovery is practically *nil.*

I have made no attempt in this paper to discuss the previous literature of the subject, as it would have extended it beyond reasonable limits. For the same reason I have not always indicated the source of all the suggestions or conclusions made. My object has been simply to give an account of the experience gained in the treatment of a series of cases of insanity by means of thyroid, and the inferences which seem warrantable therefrom. It must be said that many of these we owe already to Dr. L. C. Bruce, who has the credit of first suggesting this plan of treatment.

Discussion

At the meeting of the Northern Division, Derby, October 12th, 1898.

Dr. Legge said that Mickleover was the second asylum where the thyroid treatment was carried out to any considerable extent. They had used it at Mickleover in about seventy cases, and the conclusions arrived at had been practically the same as those narrated by Dr. Middlemass. On the male side they had got very few cases of improvement, and no case of actual recovery; whereas among the women there had been nine true recoveries. Several other cases had recovered, but had relapsed in a short time, whilst others had distinctly improved. To his mind Dr. Middlemass had rather minimised the dangers of the treatment, although he had admitted that a considerable amount of care was required. He (the speaker) had one case at death's door, where physical examination failed to reveal the fact that the patient had heart disease. Very active measures had to be adopted to prevent a fatal result. In some cases which did not quite recover he had noticed a

most distinct improvement in the patient's habits—they had become much cleaner. The treatment at first raised excessive hopes, and went through the phase that all new treatments had to undergo; but after this interval of time it might now be fairly said that this treatment placed a power in their hands which they had not possessed hitherto. It was scarcely likely that they would get as great a proportion of cures as Dr. Middlemass if they took cases at random, but in selected cases they might; and supposing only three per cent. of their patients recovered, that was very satisfactory. Could we employ any other drugs in the treatment of insanity and expect as good a result as a consequence of their use? There had been considerable controversy as to whether the cure was due to the drug or to the reaction, and his (the speaker's) opinion was that it was due to the reaction. He had a case now which he had treated four times with the drug—an epileptic dement of old standing, with wet and degraded habits, who, having been four times under thyroid, became each time perfectly well; but the improvement only lasted a few days. A similar change occurred in her after an attack of erysipelas. He was convinced that this was due to the reaction. In his experience those patients who had improved their mental state while suffering from physical illness had been mostly women. He had several cases where the temperature had apparently not risen above normal, but on taking the temperature in the vagina it had been found one and a half to two degrees above normal. The temperature of the axilla did not actually represent the body temperature in many cases. All the Mickleover cases had been treated by Burroughs and Wellcome's tabloids, given in full doses, and continued for nine days. It would be interesting to know what effect thyroid treatment had on insanity accompanied by goitre. Statistics on that point might be of some value in selecting cases for future treatment. The great majority of the successful cases at Mickleover had been not merely melancholia, but melancholia with stupor. The cutaneous system was noticeably affected; one patient covered with hair permanently recovered, and the hair disappeared. His experience led him to the conclusion that small doses long continued had little or no effect in producing recovery.

Dr. Macphail said that he had taken great interest in the literature of the subject ever since they made their original researches at Derby four years ago, and he was surprised that certain medical men averred that they had found no effects whatever. He had found sometimes most alarming effects following the doses recommended by Dr. Middlemass. In Derby asylum forty-two patients had undergone thyroid treatment in addition to the thirty cases described in the original paper by Dr. Bruce and himself. Of course they did not now give thyroid in the haphazard way they originally did, because they now reserved it for cases in which some benefit might be expected. Probably not one of those forty-two patients had thyroid during their first six months in the asylum. He did not claim that the recovery was always due to thyroid, but seventeen out of forty-two had improved sufficiently to be able to leave the institution. It was only right to say that thyroid had some influence in causing the improvement. Dr. Middlemass enumerated a long series of propositions, a large number of which were mentioned and emphasised in Dr. Bruce's original paper. There were singularly few differences between the experiences of four years and the experiences of a few months. That would no doubt astonish those who had expected more perfect indications as to the use of thyroid. As to the bad effects of thyroid, he (the speaker) might say at once that he had seen a great many instances of the heart being prejudicially affected. At least four times he had had to stop thyroid on that account. In only one of those did he know that the patient had organic heart disease, while in three they had to stop the treatment because the heart was showing symptoms of failure. They tried thyroid in many cases suffering from goitre, and could not satisfy themselves that the least difference resulted. With regard to the growth of hair, he (the speaker) had had two patients under his care almost completely bald. They were subjected to the thyroid treatment, and in one it had no effect upon the baldness, but in the other the patient had since obtained a thick head of hair. He did not quite agree that melancholic cases alone benefited, as he had had cases of acute mania which had improved under the thyroid treatment. He had not yet been able to come to a definite conclusion as to why the improvement resulted—whether it was the specific action of the drug or the reaction; but as far as his own knowledge went, he felt assured that the febrile reaction was alone the cause. He had approached the subject in a

reasonable manner and without expecting too much from the treatment, and therefore had not been disappointed with the results attained.

Dr. GREENWOOD said that from the little experience he had had of the treatment, he had formed the impression that the febrile reaction had everything to do with the improvement. The course of the case while under treatment was like that of a specific infectious disease. The patient had in many cases a rash, sometimes the mere effect of sweating, but it often closely resembled the rash of scarlet fever. The effect also resembled the influence of acute bodily diseases in the course of mental diseases, producing in some cases a marked improvement, but in other cases accentuating the disorder.

Dr. MIDDLEMASS said that there was no doubt there were dangers in the use of thyroid, but in his experience he had met none which could not be readily overcome. To his mind the danger of lung complications was the one to be most feared, and the one which required most attention. It was true that the heart was sometimes a source of trouble, but he always took particular care to examine that organ before placing the patient under treatment. He had had no such case, but Dr. Bruce had to modify the treatment in two cases, and on other occasions had to stop it altogether, although there had been no actual danger to the patient's life. The pulse would show if the drug were being carried too far. With regard to the question of reaction, he must say that his own impression was that recovery was not entirely dependent upon the febrile reaction. He had tried the thyroid treatment on a patient affected with goitre, and there was neither mental recovery nor alteration in the size of the goitre. There was no doubt that where this mode of treatment was carried out systematically it influenced recovery to a remarkable extent. For instance, last year the recovery rate was 80 per cent., and they attributed that very largely to the use of thyroid. The majority of the cases were amongst women, and it was amongst them also that they had the largest number of recoveries. On the male side, on the contrary, the recovery rate remained the same. He had omitted in his paper to distinguish between cases suitable and unsuitable for treatment. He thought after trial that cases of general paralysis and epilepsy were, on the whole, unsuitable for treatment. The general impression was that the most likely cases to be benefited were those of stuporose melancholia, but not those cases alone. Thyroid was probably an absolutely certain diagnostic of the possibility of recovery, and must be considered of importance in this relation.

The Responsibility of the Insane; Should they be punished? A Reply to Dr. Mercier.

By REGINALD H. NOOTT, M.B., C.M., Broadmoor Criminal Asylum.

I FEEL that some apology is due for again opening a subject which seemed to have been disposed of by the report of a special committee of this Association, which sat at the latter part of the year 1894.

Considering that the report referred to was, with one very important amendment, adopted by the Association at the Annual Meeting held in London in 1896, I would not have presumed to refer to the subject again, had it not been that

Dr. Mercier put before us, at the Annual Meeting of the British Medical Association in Edinburgh a few weeks ago, an opinion so totally at variance with the views that have been held and fought for by the medical profession, that I think members of this Association should have an opportunity of expressing their views upon it. I hoped that this might have been done when Dr. Mercier read his paper, but unfortunately the time at the chairman's disposal on that occasion was so short, that the discussion came to an abrupt and, I venture to think, an unsatisfactory termination. Though the object of my remarks to-day is to reopen that discussion, it will be necessary shortly to review what has been said and done, during the last few years, on the subject of criminal responsibility. Both Dr. Weatherly in 1894 at Bristol, and Dr. Maudesley in 1895 in London, referred to the thankless and embarrassing task which anyone undertook who ventured to deal with a subject which has been worn threadbare without satisfactory result. I must apologise, therefore, if I repeat much that has been said before, and which no doubt will be said again.

Although it has generally been held by the medical profession that the law, as stated by the judges after the McNaghten trial in 1843, does not accord with medical science, it was not until the year 1894, at the Annual Meeting of the British Medical Association at Bristol, that the question was fully discussed by the medical profession, and on that occasion we had the advantage of hearing the opinion of Mr. Pitt-Lewis and other members of the legal profession on the subject. Up to that time, as I understand it, the difference of opinion between the two professions amounted to this : the legal opinion was that only certain forms and degrees of insanity should constitute irresponsibility ; the medical profession generally not recognising the term " partial insanity," as understood by lawyers, maintained, and I think maintained rightly, that all forms and degrees of insanity should constitute irresponsibility.

In conjunction with Dr. Weatherly, Dr. Mercier on that occasion opened the discussion, and Dr. Mercier gave us four definite reasons which in his opinion called for some alteration in the existing law. These four reasons were, first, that it does not cover all cases ; secondly, that it leads to great variety and even contrariety of interpretation and of practice ; thirdly, that it leads to the stultification of judicial trials by the

subsequent certification of the convict; and fourthly, that it sets up a test of insanity which is inherently incapable of being satisfied. On that occasion he had the unanimous opinion of the meeting with him. At the recent meeting of the British Medical Association held in Edinburgh, Dr. Mercier read another paper on the same subject, which commenced thus :— "The controversy between the medical and legal professions that has raged for so long round this subject is now rapidly subsiding. Judges, while adhering, as they consider themselves bound to do, to the terms of a well-known formula, contrive so to interpret that formula that upon the whole substantial justice is done. Medical men, recognising that upon the whole substantial justice is done, cease to contend for an academically perfect formulation of the law, and recognise that such a formula might be found, after all, to be inapplicable to outlying and exceptional cases without that laxity of interpretation which renders the present law practically effectual."

This is practically a summary of the conclusion to which the special committee came, whose report I have already referred to. Dr. Mercier then dealt with the subject of criminal responsibility from quite a different point of view, and gave as his opinion, at the same time asking us to assent to it, that "it is in many cases right and just to punish an insane person for wrong-doing." Gentlemen, I feel very strongly that we should hesitate before endorsing an opinion which is so diametrically opposite to what has in later times been held to be the general medical opinion on the subject. If we adopt this theory of partial responsibility of the insane, the chief point of dispute over which we have fought so long with the legal profession ceases to exist, and we leave them masters of the field.

As a rule the opinions of different members of the legal profession on the subject have been given from a purely legal point of view, without any attempt to study or inquire into the medical aspect of it. One eminent judge, however—the late Sir James FitzJames Stephen—studied the subject in its medical aspects, in order to approach the subject, as far as was possible, with an unbiassed and open mind. He read a large amount of medical literature on the subject, and in his book on the *History of the Criminal Law of England* he devotes one chapter entirely to the "Relation of Madness to Crime," in which he states the conclusions to which he came. In reading

this chapter one cannot help being struck with the contradictory nature of some of these conclusions. Some of them seem to coincide exactly with what one has always supposed to be the general medical opinion; others, on the contrary, very decidedly support the opinion which Dr. Mercier asks us now to adopt, viz. that some lunatics are responsible for their acts, and ought to be punished if they commit crimes. To illustrate this point I shall quote some passages from the chapter referred to. In regard to the questions put to the judges after the trial of McNaghten, he says, "It appears to me that, when carefully considered, they leave untouched the most difficult questions connected with the subject, and lay down propositions liable to be misunderstood;" and in another passage he says, "The questions are so general in their terms, and the answers follow the words of the question so closely, that they leave untouched every state of facts which, though included under the general words of the questions, can nevertheless be distinguished from them by circumstances which the House of Lords did not take into account in framing the questions;" while as opposed to this opinion, after extremely subtle special pleading as to a possible meaning of the words "know" and "wrong," he says, "I am of opinion that even if the answers given by the judges in McNaghten's case are regarded as a binding declaration of the law of England, that law, as it stands, is that a man who by reason of mental disease is prevented from controlling his own conduct is not responsible for what he does. Again, while criticising these answers he says, "If they were so meant they certainly imply that the effect of insanity (if any) upon the emotions and the will is not to be taken into account in deciding whether an act done by an insane person did or did not amount to an offence; . . . . and the proposition that the effect of disease upon the emotions and the will can never under any circumstances affect the criminality of the acts of persons so afflicted is so surprising, and would, if strictly enforced, have such monstrous consequences, that something more than the implied assertion of it seems necessary before it is admitted to be part of the law of England;" and yet later on, when dealing with the question of insane impulses, which surely are the result of disease affecting the will, he says, "I cannot see why such impulses, if they constitute the whole effect of the disease,

should excuse crime any more than other sudden and violent tempers."

In the following passages also Sir James Stephen uses arguments which decidedly support the medical view of the relation of insanity to self-control. He says, "The facts that a man stammers, and that the pupils of his eyes are of different sizes, are in themselves no excuse for crime, but they may be the symptoms of general paralysis of the insane, which is one of the most fatal forms of the disease. Why should not the existence of a delusion be as significant as the existence of a stammer?" "To a sane man the belief (however caused) that his finger was made of glass would supply no reason for taking any peculiar view about murder; but if a man is mad, and such a belief is a symptom of his madness, there may be a connection between the delusion and the crime as insane as the delusion itself." "I do not think that it is expedient that a person unable to control his conduct should be the subject of legal punishment."

In spite of these opinions and conclusions, in the latter part of the same chapter he says, "Parts of the conduct of mad people are not affected by their madness, and if such parts of their conduct are criminal they ought to be punished for it." In another passage, "I should be sorry to countenance the notion that the mere fact that an insane impulse is not resisted is to be taken as proof that it is irresistible;" and "the practical inference from this seems to me to be that the law ought to recognise these various effects of madness. It ought, where madness is proved, to allow the jury to return any one of three verdicts—guilty; guilty, but his power of self-control was diminished by insanity; not guilty on the ground of insanity." Following on which opinion he concludes by saying, "The man who, though mad, was found guilty I would hang, but if the jury qualified their verdict in the manner suggested in respect of any offender, I think he should be sentenced,—if the case were murder, to penal servitude for life, or not less than, say, fourteen years; and in cases not capital to any punishment which might be inflicted upon a sane man." Those, gentlemen, were the opinions of Sir James Stephen as to in what cases and to what extent the insane should be punished. To those opinions, practically, we commit ourselves if we endorse Dr. Mercier's latest theory, viz. that "it is in many cases right and just to punish an insane person for wrong-doing."

The position of the medical witness in cases in which a plea of insanity is entered is even under the present circumstances difficult, I might almost say farcical enough ; but if such partial responsibility of the insane as Dr. Mercier would have us recognise is accepted, the position of the medical witness would be so difficult that I cannot imagine anyone being capable of undertaking it. The task of "making the punishment fit the crime" would rest, of course, with the legal authorities, but they could hardly do so satisfactorily unless the degree of responsibility remaining to the unfortunate lunatic had been clearly demonstrated by competent medical witnesses. I do not know if medical evidence would then have more weight than it has at present. It certainly could not have less. Only a few months ago two men were tried at the Central Criminal Court before the same judge, in each of which cases the plea of insanity was entered. In the one case the medical evidence was very decidedly to the effect that the accused was sane. The jury found him insane, and he was ordered to be detained during Her Majesty's pleasure. In the other case the medical evidence was to the effect that the accused was insane at the time the crime was committed. The judge summed up very strongly against the plea of insanity being borne out ; the jury found the prisoner guilty, and he was sentenced to death. He was afterwards medically examined by order of the Home Secretary, and as a result of the medical report he was ordered to be detained during Her Majesty's pleasure. I imagine, if this theory of partial responsibility of the insane be accepted, that medical evidence in these cases would more than ever be discredited by the legal authorities ; at the same time there would be a greater temptation for medical witnesses to become medical advocates, which above everything is to be avoided. The object of medical witnesses in these cases *should* be to bring out all the facts bearing on the question, irrespective of whether such facts support the plea of insanity or otherwise. It is the business, of course, of legal counsel to bring about a conviction or an acquittal, as the case may be, on the facts as they appear to him.

The following examples will explain my meaning, and will at the same time show to what an extraordinary degree the opinion as to the value of medical evidence will differ, even in the same individual, under different circumstances. An eminent

Q.C. engaged *for the prosecution* in a case of murder in which a plea of insanity had been entered, thus addressed the jury: "Did the man know the nature of his act, and the consequences of it? If the jury found that he knew the act he committed was wrong, if he knew the quality of it, and if he knew what was right and wrong, and chose the wrong, then he was guilty of the crime with which he was charged. The learned counsel for the defence had asked them to decide that he was insane because the doctors said so, but that would be a very dangerous doctrine to admit. Their ordinary knowledge told them that there was a strong leaning on the part of those who had the care and treatment of the insane towards thinking that people were insane who were peculiar, and if they were to act on the *ipse dixit* of a doctor, great danger would be incurred of the guilty escaping punishment." That very same gentleman, being engaged in a similar case *for the defence*, addressed the jury in these words: "You will observe whether, at the time he caused the death of the man, he was accountable for his actions. And further, I say that a person believed to be insane at the time he commits such a deed is properly allowed by the law to be excused from what would otherwise be a criminal action. What is there in the evidence upon it? You have two of the most eminent physicians in your town examined on this subject. We all know that there is no science more difficult than that of finding out the state of a man's mind, and it is only after years of careful attention to the subject that an opinion can be formed on the matter. You have here two gentlemen who have had that experience in a striking degree, and they on oath tell you, as scientific men, thoroughly conversant with lunacy in all its forms, that in their deliberate judgment this man, who now sits before you, was at the time the deed was committed unable to distinguish between right and wrong. If you return a verdict of guilty after you have such weighty opinion, you throw upon yourselves the responsibility of placing your opinions of the state of the man's mind—which I submit with all due respect you cannot be expected to do—against those gentlemen we have heard." This is a truly remarkable difference of opinion as to the value of medical evidence in these cases.

On what grounds does Dr. Mercier ask us to accept this theory of partial responsibility of the insane? Because, for the benefit of the community at large, and for the patient himself,

a patient who, while on parole, has got drunk, is refused his parole until such time as it is considered he has learnt such power of self-control as would be likely to prevent him from erring in that direction again. Because it is considered that a woman who has been "fighting and smashing" is not at that time a fit person to attend the weekly dance. Because, in order to maintain some sort of discipline and order in the asylum, and to protect other patients, one holds out various inducements to good behaviour, such as an allowance of tobacco, pocket-money, &c., and withdraws them when necessary on the principle of rewards and fines.

I maintain most strongly that these should not be considered punishments at all. They are simply means by which we try to induce patients to exercise as much control as the nature of their disease will allow; so that, by promoting as far as is possible a habit of self-control, we aim, in curable cases, at re-establishing such an amount of mental balance as will enable the patient to take his or her place in society; or in chronic and incurable cases we aim at preserving a requisite amount of law and order, without which it would be quite impossible to carry on any institution for the care of the insane. And in doing this a very large amount of discretion has to be used; for it must be in every one's experience who has had to do with the insane that a very large number are utterly unamenable to any such bestowal of privileges, and have to be managed in a different way; *e.g.* by being placed in a part of the asylum where restriction of liberty is greater, and where there is a stronger staff of attendants, and in some cases treated by temporary seclusion. To my mind there is a great difference between this withdrawal of privilege and the punishment of sane crime by imprisonment, and, to use Dr. Mercier's own words, the infliction of "bread and skilly and the plank bed." In the latter case it is recognised that the individual could and should have abstained from his wrong-doing. In the case of asylum patients who misbehave themselves, it is so far recognised that they cannot be considered responsible for their actions, that the character of what Dr. Mercier chooses to call punishments is quite different from the kind of punishments inflicted on sane criminals. For instance, no punishment takes the form of inflicting bodily pain, or the deprivation of the ordinary necessaries of food and rest, but only the withdrawal

of certain privileges, which may be called luxuries. Indeed, if we recognise this theory that the insane should under certain circumstances be punished, we shall be implanting in the minds of attendants and nurses a most dangerous notion of the management of the insane, and one which would undoubtedly lead to most serious consequences. At the same time we shall be recognising the legal opinion as to self-control in the insane, which is strongly exemplified in the following case quoted by Sir James Stephen :—"A woman felt suddenly and violently impelled to kill with a knife the child she was nursing. She threw away the knife, rushed out of the room, and asked a fellow-servant to sit with her, because she was 'beset with evil thoughts.' She woke in the night with a similar impulse, but resisted it, saying, 'O God, what horrible, what frightful thoughts!' She took some medicine and became calmer. On another occasion the same thing happened, but she still resisted. Ultimately the desire to harm the child died away." Sir James Stephen makes the following remarks on the case :—"That the impulse was insane there can be little doubt, but sane or not it was obviously resistible, for it was in fact successfully resisted, and surely it was the legal duty of the woman to resist it." So that we may suppose if she had not been able to resist it, and had killed the child, Sir James Stephen would have considered that she was responsible for the act, and should have been punished for it ; yet he says "that this impulse was insane there can be little doubt."

I hope, gentlemen, that I have made clear what dangers we are risking if we recognise this theory of partial responsibility of the insane. It seems to me that the bestowal and withdrawal of privileges is used in asylums exactly in the same way as a similar system is used in the nursery—for the purpose of training : in the latter case to promote self-control, which the child, on account of its want of experience and immature development, has never had ; in the former case to re-establish that self-control of which disease has deprived him.

Discussion

At the General Meeting, London, 13th October, 1898.

The President.—The difficulty in approaching a discussion of this sort lies in the definition of terms,—what exactly Dr. Mercier has in his mind which he calls "punishment," and what Dr. Nootт has in his mind which he denies to be "punish-

ment." I hope, therefore, that Dr. Mercier will be able to say what he means by "punishment," and what he means by "partial responsibility." We know that in Scotland recently the law did recognise partial responsibility. A man was condemned to death for murder, and after his condemnation he was examined by a committee of experts. So far as one can gather, for the precise facts have not been published, their opinion was that although they could not certify him to be legally insane, yet his mental state was so far deteriorated that it would be improper to punish him to the full extent of the law. The consequence was a life sentence in the convict prison. I accept that as a valuable precedent. Another difficulty in a debate of this sort is that we are not dealing with concrete problems, but with theories. If we could have the exact facts relating to the individual man and the proposed punishment, then we could discuss the question with that accuracy which we cannot apply without great reservations to a series of academic propositions.

Dr. McDowall.—The President has referred to a celebrated case, but when Dr. Mercier was reading his paper at Edinburgh he cited another where this gradation of punishment was awarded. A man appeared before one of the Scottish sheriffs a number of years ago, and before he was sentenced the sheriff deemed it prudent that he should consult one or two experts as to the man's mental condition. They reported that they considered him mentally feeble, but partially responsible for his conduct, and therefore partially amenable to the law. The punishment was therefore modified on account of the prisoner's mental condition.

Dr. Weatherly.—It seems to me that we have here to deal with two questions: first, whether we are really satisfied with the existing state of the law, and the way in which the law is carried out. I do not think there can be any doubt that we are not satisfied. It was only the other day that I waited before a judge in regard to a case of melancholia, and was not allowed to open my mouth. There was a long legal argument, and then the prisoner was sentenced to death. Nevertheless he was ultimately reprieved. We must not overlook one great fact, that legislation and legal procedure in these cases are to a very great extent dominated by an hysterical, emotional, utterly absurd public opinion which is conceived in ignorance. (Hear, hear.) William Terriss happened to be killed by a lunatic; the public with one accord said, "Hang him!" If Terriss had been an unknown individual they would have said, "Let him go to Broadmoor." Anybody who traces the history of legislation with regard to criminal responsibility must be impressed with the fact that from time to time it has been altered by this ignorant public opinion. I am perfectly certain that the law is unsatisfactory, and that it must be altered. In speaking of criminal responsibility I presume that we are talking of persons accused of murder. Now the lawyers invariably say that we go into the witness-box, for the defence or the prosecution, far too much as advocates instead of unbiassed witnesses. I admit it. We become too much of advocates, and why? Because we know we are there to save from death an unfortunate creature who we implicitly believe is irresponsible for his act. That human nature which must come out—thank God!—in all of us, does to a certain extent make us advocates for the unfortunate prisoner, and possibly places us in a wrong light before judge and jury. There is this, therefore, in favour of Dr. Mercier's contention, that if partial responsibility were recognised by the law, we should not pose so much as advocates, and should have a great deal more liberty in stating our opinions. But when it comes to the word "punishment," then I think there is something very wrong if that means that the prisoner, being a lunatic, is to endure the plank bed and work in a convict gang.

The President.—What do you mean by a "lunatic"?

Dr. Weatherly.—I mean a person who we, in the witness-box, state is suffering from such unsoundness of mind as to render him wholly irresponsible for the deed he has committed.

Dr. Douglas.—I only rise to ask a question. Dr. Weatherly assumes that this is confined to murder and homicide; I certainly understood quite the contrary. (Hear, hear.)

Dr. Stewart.—Suppose we confine our attention to cases of life and death, and suppose we merely think of the question as it affects some particular individual. Our minds must be affected as human beings by the thought that if we make a mistake—and medical men are liable to make mistakes—that unfortunate man may be

finally removed from showing, by his subsequent history and the subsequent developments of his disease, that he was truly insane. Therefore I say let us not be bound by any ideas with regard to the position that the individual occupies, but rather limit our view to his mental state, irrespective of what he may suffer in the future. I look upon the opinion of Dr. Mercier as most dangerous. Are we or are we not to look upon a person who is insane—a lunatic, if you like, although I object to the term, as my father did before me, because it is an unscientific term—as a person responsible for his actions? I think the whole thing is in that nutshell. Is that person to be condemned to any punishment whatsoever?

Dr. Douglas.—If I were asked to give an answer to the question as to the responsibility of the insane, I would say that in some cases they are responsible. I quite agree with Dr. Weatherly that the law does want alteration and reform; but consider how very indefinitely this question is put before us: "The responsibility of the insane." Who are they? Are they those who go about amongst their fellowmen every day, and are capable of transacting business, or those who have to be confined in an asylum? Take the case referred to by Sir James Stephen—the woman who resisted the impulse to kill her child. The difficulty lies in the proof. There are cases in which some punishment should be meted out to the insane, and there are other cases in which punishment is out of the question. It is quite impossible to formulate a general law to govern all cases of insanity.

Dr. Newington.—It seems to me there are two distinct subjects before the meeting: (1) as to the responsibility or irresponsibility of the insane; (2) are the insane to be punished? With regard to the first I have little to say; the discussion might go on for quite an indefinite time. My view coincides with what Dr. Weatherly has suggested. There will be no harmony between medical and legal demands until a third or middle course of treatment is established. We want a something so arranged that too much justice will not be done on one side and too little justice on the other. With regard to the second question, the position of this Association as to punishing the insane is in my opinion very much like the present position of another very important body, that is Her Majesty's Government with regard to Fashoda. These matters can be discussed as subjects of high and dry philosophy, but as an Association we can but discuss them with a view to action. I do not think we can back up such an idea for a single moment. We have been extremely radical in improvements for many years past, but I do not think we can afford not to be conservative enough to at least stick where we are, and certainly not go back. There is a great deal in what Dr. Mercier says about the power of convincing insane individuals by rather unpleasant means that they might do better than pursue their insane course of conduct; but it is not for us to enter into any discussion. Perhaps it may be rather too much of a Sunday-school way of treating it, but I do not think we should in any way discuss this matter with any idea of forsaking what we consider to be our true principles.

Dr. MacDonald.—I rise to support what Dr. Newington has just said, and to take exception to the statement put forward by Dr. Mercier that the insane should be punished. I will only speak for myself as regards the asylum over which I have the honour to preside. I do not authorise punishment. If Dr. Mercier applies the term "punishment" to methods of treatment such as withholding tobacco, amusements, and the like, we must disagree as to the meaning of the word. If we apply a treatment which is very repugnant to a patient, and have to enforce it, is that punishment? If you have to forcibly feed a case of melancholia, is that punishment? If Dr. Mercier says that because a patient has had a luxury stopped it is a punishment, I deny it *in toto*. I regret that Dr. Mercier should convey such an impression to the public as is generally conveyed by the word "punishment," and feel sure that methods of treatment generally approved will not be done away with because of his opinions.

Dr. Jones.—I should like very much to endorse the remarks of Dr. Newington. Nearly all of us are responsible for the treatment of the insane, and I think it would be a very sad thing if it went into the world from this Association that punishment in any shape or form is approved by us. I quite agree that a good deal of this discussion is due to a misunderstanding of terms. If intimidation, and if argument such as Dr. Mercier advances, are to be the basis of our treatment, I think the sooner we change the use of our terms the better. I have seen the effect of putting patients into padded rooms, seclusion, and the effect of withdrawal of patients from

dances, and my experience is that it shocks and embitters, and certainly humiliates these patients.

Dr. RAYNER.—There is really a great need of definition. We want to define what is punishment, and what is treatment. For my own part, I certainly think that every phase of insanity should be treated; and I believe until the law gets rid of the idea of punishment, and substitutes the idea of treatment for crimes, we shall always be in opposition to the law.

Dr. LANGDON-DOWN.—It appears to me that the treatment of children and treatment of insane persons should be placed in the same category. We should lay before the court all the circumstances and facts, and leave it to the jury to return their verdict, and to say how far the prisoner should be held answerable for his conduct. Dr. Mercier avoided the necessity of stating whether the persons he referred to were technically insane or not.

Dr. MERCIER.—Sir, I have listened with great attention to this very interesting discussion. I have waited, and waited in vain, for something to answer. I hoped that my adversaries might advance arguments. I regret to find I have been disappointed. A great deal has been said about things that had nothing whatever to do with my position in Edinburgh, and I remind you that the title of Dr. Noott's paper is that it is a reply to that position, and therefore I am justified in expressing regret that a lot of things have been brought in which were not alluded to by me at all. Dr. Noott tells us that it is the business of counsel to do the best he can for the side for which he is engaged. If for the prosecution he must endeavour to obtain a conviction, and if for the defence he must endeavour to obtain an acquittal. Well, I do not consider that very nefarious conduct. Dr. Newington says that we ought not to discuss this subject.

Dr. NEWINGTON.—With the result or intention of forsaking our principles.

Dr. MERCIER.—I have the greatest respect for him, but I hope that we shall develop our principles and elevate them to greater principles than they were before. I utterly repudiate the notion that there is anything connected with insanity that this Association ought not to discuss. As to Dr. Noott's paper and the other criticisms, the answer I give to-day to all my critics is simply, This is exactly what I prophesied in my original paper at Edinburgh. I said then that I read it with the full consciousness that my views would be either misunderstood or wilfully misinterpreted, and that I should be called all sorts of names, and told that I advocated a plank bed and skilly for every lunatic. It is what usually happens to those who would benefit their fellows, and we must expect it, and not be disappointed when we get it. Our President has very truly stated that the matter is very largely a question of definition of terms. I say these measures you take are punishment; you say they are not. You admit that these measures are desirable and necessary, and that you use them. You all admit that you do use towards patients in every asylum in the country certain measures—withdrawing certain privileges—and you say this is not punishment. You say it is abominable to call it punishment; to say that we are punishing lunatics is deserting all our old principles and bringing us down to a low level, and publishing to the world our own degradation. I maintain that when you stop a man's tobacco or beer, or knock him off extra diet, prevent his going to the weekly dance, or stop his parole, or withdraw other privileges, it is every bit as much a punishment as if you withdrew from him the privilege of going about at large by locking him up. (No, no.) It is not so severe a punishment, but it is a punishment. We will take a case and I will ask for an answer. A man is brought up before the beaks and given the alternative of 5*s.* or seven days. Will anybody deny that the fine is not as much a punishment as the imprisonment? (Yes.) What is a fine? Taking money out of a man's pocket; stopping his wages; diminishing his income. That is what I do when I have a patient who is destructive and tears the paper off the wall, breaks up the furniture, steals my books, and tears the covers off. I say to him, "You see this book; it will have to go and be rebound, and I shall charge you for the damage by stopping it from your pocket-money." That is a fine just as much as if I had taken him up to the court and he had been fined with an alternative. Both are punishments, and you cannot distinguish between them; and if it is punishment to withdraw money, equally is it punishment to withdraw the product of money. You withdraw a man's tobacco, and say it is not a punishment. Try that discipline on yourself, and say whether it is punishment or no. I say it is punishment when pain is inflicted upon a person in

any way, either by flogging or by the withdrawal of his tobacco, or what not, for the sake of the moral effect,—in short, for the sake of aiding his self-control; and that is Dr. Noott's own position. He says we must treat lunatics very much in the same way as children are treated in the nursery. How do we treat children in the nursery? We aid self-control by a graduated system of rewards and withdrawals of rewards and other punishments. Mind you, I call it punishment, because I want to make your flesh creep. I want to bring it home to you what you have been doing all these years. I do not say to my patient, "I am going to punish you because you have torn the back off my book." I say, "I will give you an aid to self-control." The matter is one of words and names. You are all agreed as to the facts, and whenever you cause pain to any person by any means whatever, for the sake of the moral result of aiding self-control, you are punishing him. (No, no.)

Dr. Noott misrepresents me, of course unintentionally, when he says that I would punish under certain circumstances an insane man as if he were sane. Evidently he has not read my paper. Among the three principles I laid down were these:—(1) That no insane person ought to be punished for any offence with the same severity as a sane person ought to be punished. (2) That there are many cases in which an insane person should not be punished at all for wrong-doing. How then can it be said that I would punish the insane as if they were sane? We should not punish a girl maniac who had murdered her child; we should not punish a general paralytic who had stolen something; but let us remember this, that it is not only the moral, the virtuous, and the good people who go out of their minds. Suppose a professional thief becomes insane. Well, gentlemen, we know it is a matter of daily occurrence that after people have become insane they continue to carry on their professions, more or less imperfectly and for a certain length of time; and the professional thief does the same until his insanity is recognised. Is he not to be punished at all? I admit that he is not to be punished with the same severity. Are not the business transactions of the merchant who becomes insane, and during the incipient period of his insanity carries on his business in a capable manner, perfectly valid? And has he not to reap the consequences, for good or for evil? So with the thief who continues to carry on his business. Is he not to be treated as to a very large extent sane, although he is to some extent insane? Is he, too, not to reap the consequences of his acts? The whole of this discussion pivots on one point, which I thought had been abandoned even by the laity, but which appears to remain clinging in the minds of some of my *confrères*,—that when a man is insane he is totally insane, a completely altered being. A man may be insane to a very trifling extent, and over a very large sphere of his conduct he may be responsible; and if in this sphere of his conduct he commits wrong he ought to be punished. Or he may be insane over a large area, and sane in but a small area of conduct, and the proportion between the sane and insane area of conduct varies in every case. The difficulty we have in courts of law and in our daily practice is in determining in a man's conduct how much belongs to the sane and how much to the insane. Until we recognise that, and root out from our minds the idea that because a man is insane therefore he is a totally altered being, and consequently absolutely and utterly irresponsible for everything he does, we shall never understand insanity.

The PRESIDENT.—Naturally, when Dr. Mercier uses the word punishment it irritates. Now-a-days, in any case, we are very much disinclined to talk about punishment in the sense of retribution. What we ask for is treatment. Dr. Mercier may call withdrawal of the trivial awards of asylum methods "punishment," but I regret that such a strong word has been introduced into our discussion. It is liable to gross and wide-spread misunderstanding. He says that no one would punish the insane mother who kills her child. But she is sent to Broadmoor, she is deprived of liberty. Is that not a severe punishment? The real difficulty is not with regard to the absolute lunatic, but with regard to those who are partially insane. If we have only to deal with patients who are so insane that the man in the street can recognise their malady, we can easily induce the law to take our view; but when a difficult diagnosis has to be made, when we desire that the prisoner should have the benefit of the doubt arising from our imperfect knowledge, it seems to me that those cases on the borderland will always offer the greatest possible difficulty.

Dr. NOOTT, in reply, said: I consider anyone to be insane who is fit to be certified as of unsound mind. I say that such a person ought not to be punished. Dr.

Mercier chooses to call the withdrawal of tobacco and certain privileges "punishments," and if this definition existed only in his own mind as regards the insane, no harm would be done; but, unfortunately, his opinions were widely published, and the general public will very quickly get into their heads that we are going back to the time when the insane were very severely treated. Dr. Mercier also said that the medical witnesses should be able to give the judge so much assistance that mitigated punishments should be inflicted. That means, under some circumstances, the insane should be punished because in his opinion all insane people are not totally insane. I absolutely disagree with him. If a person is insane, I maintain it is impossible for any one to say how far he is insane, how far he is responsible or irresponsible. (Hear, hear.) As to the case mentioned by Sir James Stephen as having had a delusion that his finger was made of glass, no one could say how far that delusion might affect that person's mind. I maintain that if the person is insane at all, he is totally insane, and that we cannot recognise any such thing as partial insanity. Dr. Mercier says, "Is the thief to be punished if he becomes insane?" I do not see why the thief who has become insane should be differently treated from any ordinary person.

Lunacy in Private Practice. By H. C. Bristowe, M.D., Wrington.

I desire to-day to show, to some extent, the difficulties the general practitioner of medicine has to contend with in the treatment of lunacy; difficulties certainly unknown in public asylums, and only partially appreciated in private institutions.

The first, and I may add the natural impulse of every medical man in private practice, on being called to a case of insanity, is to relieve himself of a certain amount of responsibility, and at the same time to do what he considers best for his patient, by sending him to an asylum with the least possible delay. No doubt that in itself is a very proper course to pursue, but there are many difficulties in the way. The case may be of such a character that certification is a difficult matter; then the relations raise objections; perhaps the magistrates refuse to make the order, or finally the patient may be of the quiet demented type better fitted for treatment at home, or in the lunatic ward of a workhouse. This accommodation, however, is often wanting, and the patient becomes one of those unfortunate outcasts who is unfit to be kept at home, and is yet unfit for asylum care.

I may say at once, as a foundation on which to build my whole subject, that in private practice the treatment of an insane

person is essentially the treatment of his friends. Many patients who become hopeless dements might never have been lost to the intellectual world had their friends been persuaded of the necessity of prompt and active treatment. I cannot over-estimate the dangers of delay, both immediate and remote. I was called to see a patient one Sunday morning—a man who had been sent a distance of many miles from his home for a change of air, because he was depressed and unable to manage his business. He was suffering from acute melancholia of a suicidal type. I gave the friends full directions, and warned them of the apparent dangers, and left with the relieving officer to make arrangements for his immediate removal. In an hour, before a magistrate could be seen, the patient had cut his throat. Was he sane when he left his home? Why was the patient sent for a holiday instead of to an asylum? The answer can only be a presumptive one. Another point arises from this case—why should not urgency orders exist for pauper as well as for private patients?

Delay is more often caused by the unwillingness of friends to have the patient sent away. In some cases the prejudice is so strong that treatment must be carried on in a private house, which is generally most unfit for such a purpose. For instance, a case of puerperal insanity was kept at home because at first the husband would not believe his wife to be mad, and later on could not be persuaded to part with her, believing she could be just as easily cured at home. Eventually he did consent, but too late, for though she has now left the asylum she has never properly recovered.

Why, in the many courses of lectures given under the auspices of the St. John's Ambulance Association, cannot one lecture be added to teach the public the seriousness of mental alienation, and the dangers caused by the delay of active treatment? Most uneducated persons would prefer that their relations had a limb amputated in their own homes than allow them to spend a month or two in an asylum, even with the prospect of their eventually becoming useful members of society; when too late they are glad enough to be rid of them.

Another serious difficulty lies in obtaining orders from the justices. At the same time I must say that some of them take a great deal of trouble over the matter. Some, on the grounds that they are not experts, take a judicial view of the

case; but others, not content with weighing the evidence put before them, attempt to test the mental condition of the patients. The result is often disastrous. These same justices, when seated on the bench, pass judgment on the evidence before them as a matter of course, and do not require that they shall themselves have witnessed the crime before convicting the prisoner. They seem to forget that a medical certificate of insanity is a statement on oath.

A very different form of difficulty which we have to contend with is the inability that many persons, even members of our own profession, have in detecting insanity in its earlier stages. Indeed, not infrequently are well-marked cases of insanity regarded by the medical attendant as cases of hysteria. Perhaps some of the greatest mistakes in this respect are perpetrated by specialists in diseases of women.

The following case gave me much trouble and anxiety. A young lady begins to show morbid mental symptoms, and her mother, as we should expect, discovers that her menses have ceased. The unfortunate patient is taken at once to the gynæcologist, who straightway treats her for amenorrhœa. Her mind is at once fixed on her sexual organs, and from that date erotomania to a greater or less extent ensues, and in addition to the risk of permanent mental aberration she runs a risk of being dishonoured by the first reprobate thrown in her way.

I must deal shortly with those patients who must be treated in their own homes. In the houses of the well-to-do, after the proper treatment by their friends, which is by no means an easy matter, there is very little to be said which does not hold good for those cases removed to an asylum. One's time is taken up in preventing or counteracting the injudicious actions of those around them. But in this class a trained attendant is so easily obtained that one can count on a good deal of assistance. In the lower middle classes, however, trained attendants are too expensive, and when space is limited the difficulties become far more serious. It is common to find that an injudicious act has caused a relapse in a patient who was progressing favourably. If there is a well-marked suicidal tendency we are often told that the patient does not really mean to carry out his threats. His friends consequently fail to have him properly watched, and the disastrous results are recorded in the daily press. Although in adverse surroundings it is difficult to bring moral influences to

bear on a patient, a good deal can be done to guide him along the right path.

In the lower classes the outlook is almost hopeless unless the patient can be removed to an asylum. But in this very hopelessness a gleam of hope arises, for the burden of an insane relation is so great that relief is soon sought, but only if the case be acute and troublesome.

My experience confirms me in the belief that the proper treatment of insanity can only be conducted satisfactorily in asylums. Where wealth is at command of course much may be done by careful home treatment, or well-regulated travelling; but how much better asylum treatment is can only be judged by those who have known both. Where wealth is wanting it is appalling that the prejudice wrongfully attached to the name "asylum" should cause so many hopeless cases. To the general public the lunatic asylum has a portal over which is written the dread motto, "Abandon hope, all ye that enter here." We may in the course of years teach people the real nature and the value of these institutions, but meanwhile it is this difficulty of a name which fetters the action of the general practitioner, and causes accumulation of the chronic insane.

As regards those on the border between sanity and insanity, in my experience the majority are much better treated outside the walls of an asylum, so long as they are capable of such self-control as maintains them useful members of society; but when they pass beyond this boundary they should be placed in asylum care if medical men are found bold enough to certify them.

No doubt it was for the benefit of these borderland patients that the law as to voluntary boarders was made. Does this law help them? In my limited and unfortunate experience it does not, for in such cases certification has nearly always proved ultimately necessary.

Finally, what is to be done with aged harmless dements? Many are kept quietly and peaceably at home, and do well there; but where homes are cramped and money scarce, and the workhouse impossible, it becomes our duty to send them to an asylum, although many of us in general practice are just as unwilling to do this as the authorities are to receive them.

Discussion at the meeting of the South-Western Division, Bath, October 19th, 1898. See "Notes and News," *infra*.

Observations on the Classification of Insanity.[1] By Edwin Stephen Pasmore, M.D.Lond., M.R.C.P.Lond.; Second Assistant Medical Officer, London County Asylum, Banstead.

In introducing to your notice this afternoon a few observations on the classification of insanity, I feel able to touch only the edge of the fringe of a very large subject—a subject as abstruse as it is extremely interesting. In the course of some original work I have been carrying on at Banstead Asylum during the last few years, and which I hope to publish shortly, I was struck, whilst noting the mental states of cases, by the frequency with which some mental symptoms were always associated. This grouping, as it were, of symptoms differed in different states of mind. For instance, in one particular state of depression the symptoms arranged themselves in three groups in certain states of body I shall hereafter mention, in the following order:

1. Depression with morbid ideas and temporary impairment of memory.

2. The same condition as above with hallucinations of hearing.

3. Depression with morbid ideas, delusions of persecution, and hallucinations of hearing, but without impairment of memory.

Other psychic phenomena such as stupor, refusal of food, and suicidal tendency would in some cases be present.

Clinical history.—The following is the usual clinical mental history of this association of symptoms.

The first symptom noticeable is depression. This depression, starting from slight lowness of spirits and passing through phases of intermediary character, later may be described as a state of saturated grief; the mind becoming apathetic and introspective, energy and will are gradually lost.

Everything becomes irksome, the performancc of the ordinary and necessary duties of life are neglected in consequence, and then sleeplessness follows.

A little later on this state of depression is grafted, probably through sleeplessness, a state of general confusion of ideas. The sufferer goes about in a dreamy, absent-minded manner—

stuporosed, in fact,—at times recognising, but not always being able to appreciate what is going on around.

With the onset of this confusion of ideas the memory begins to fail, and the faculties of attention, retention, recollection, and recognition sink into abeyance. This fact appears to increase the emotional condition, and the state of mind at this period (which may be lachrymosed, restless, resistive, with at times refusal of food and suicidal tendencies) is markedly characterised by intense mental suffering, as is evidenced by the anguished, terrified, and dejected expression.

This stage in the history of the disorder might continue for an indefinite period, but sometimes terminates in sudden recovery if the patient be young ; or, on the other hand, passes on into a state of early dementia if the patient be much beyond the middle period of life.

Should, however, the case show a psychic progression, *improvement takes place for a time.* The stupor and general confusion pass off, the memory improves, the expression changes, and the patient will engage in conversation if addressed. Then, by this means, it will be found that a little before or coincidently with this apparent recovery, hallucinations, from mere sounds to well-recognised utterances, develop.

On these hallucinations theories or delusions are generally based, at first fleeting and changeable in character as a rule, later to become of a fixed persecutional type and ascribed to unseen agency, especially if the hallucinations take the form of well-defined or familiar voices.

These psychic developments, at times of such a nature as likely to give rise to fears or suspicions of personal danger, might lead to maniacal outbursts, and acts of a most violent, dangerous, suicidal, or homicidal character.

As the case goes on the disorder becomes one of chronic delusional insanity, with fixed ideas of persecution, and ends finally as dementia.

Before this end comes, in some cases, if the physical state is not a grave one, some intercurrent fatal malady might terminate life. On the other hand, *recovery takes place if the physical state is one amenable to treatment, and the mental condition is discovered at an early stage in its development before marked hallucinations or pronounced delusions manifest themselves.* With recurring attacks, as the symptoms appear to become more and

more intensified with each successive onset, the chances of recovery become less and less.

Such, then, as completely as I have been able to trace it, is the clinical mental history of the symptom-combine which I propose to designate "deprimentia."

In 500 cases I have investigated the morbid physical states of body which were associated *with this train of symptoms* belonged to the following types :—Diabetes, gout, anæmia, heart disease due to failure of function, *i. e.* incompetence, disease of any of the glands of the body causing loss of function of those glands, due to primary disease, chronic jaundice through retention of bile, &c., amenorrhœa, metrorrhagia, and menorrhagia at all ages, chronic disease of the lungs (excluding phthisis and specific diseases), gastritis or enteritis (chronic or acute) where the condition is due to primary affection of the glands of the intestinal tract, so perverting the normal secretion.

These morbid states as far as our present knowledge goes *must not be traceable to any external agent.* This fact is most important.

At first sight it would appear that this grouping of mental symptoms was common, but on closer examination it will be found that such is not the case. The morbid physical states thus met with may be classified as follows :

(I) Excess of some normal constituent :—(1) Glycosuria ; (2) Diabetes ; (3) Gout ; (4) Jaundice. Sugar, uric acid, and bile being normal constituents of the blood.

(II) Deficiency of some normal constituent :—(1) Anæmia, due to deficiency of hæmoglobin ; (2) Exophthalmic goitre, which Mr. Horsley has lately attempted to show is due to a deficiency and alteration of the normal secretion of the thyroid gland.

(III) (*a*) Alteration of a physiological process without anatomical change:—(1) Amenorrhœa at adolescence ; (2) Metrorrhagia at the climacteric. (*b*) Alteration with anatomical change :—(1) Gastro-intestinal glandular disease (not due to a specific germ as far as we know); (2) Heart, kidney disease, &c.

From the classification of these morbid physical states, and from the fact that this train of symptoms occurred only when the diseases associated *were not due to some specific microbe or extrinsic cause*, it was possible to make the following enunciation, viz. that the morbid physical state of body met with was associated

with excess, deficiency, or alteration of some normal constituent, or the disturbance of some physiological process essential to normal metabolism. I propose to comprehensively term these morbid states of body autotoxæmia, and the train of symptoms associated autotoxic insanity, or "Deprimentia." We may then define autotoxæmia as that morbid condition of body, not traceable to any external agent, but which is associated with excess, deficiency, or alteration of some constituent of, or the disturbance of some physiological process essential to, normal metabolism. The associated psychic phenomena of depression, temporary impairment of memory and hallucinations of hearing, and the subsequent progress of these symptoms, "Deprimentia." This word, therefore, I should suggest should not have a vague general meaning as melancholia has had, but should be applied specifically to the train of symptoms such as I have described, associated with autotoxæmia. [Here the author related a series of cases.]

I examined systematically 300 consecutive admissions, 100 each of consecutive deaths and discharges, and 36 cases of the same physical states of body at various ages, with the accompanying mental symptoms.

Time will not permit me to enter into detail about these statistical examinations, but from them I have compiled seven tables of reference with the following heads:

Table I. Showing physical and mental states in 100 cases of first attacks. II. Showing physical and mental states in 100 recurring attacks. III. Showing physical and mental states in 300 consecutive admissions. IV. Showing physical and mental states on admission in 100 discharges, in which officially no cause was assigned for the mental disorder. V. Showing physical and mental states on admission in 100 deaths. VI. Showing, in three sub-divisions of six each, the mental symptoms and physical states at various ages in first attacks. VII. Showing, in three sub-divisions of six each, the present and past mental symptoms and physical states.

They all tend to show that with certain states of body certain trains of symptoms exist.

Table I shows that in first attacks, with an autotoxæmic state of body such as I have described, one always gets the same train of symptoms.

Table II shows that different mental states were recognisable

with different bodily states, and this was the case also in recurring attacks.

Table III shows the same conditions as Table II.

Table IV shows that in a great many of those discharged in which no cause could be assigned for the insanity, the physical state was one amenable to treatment, if not autotoxæmic, alcoholic, or such like ; and that the train of symptoms corresponded with the physical states as shown in Tables I, II, and III.

Table V shows that a great many of the deaths were in cases where the physical states were extremely grave and not amenable to treatment, or due to some acute intercurrent disease such as pneumonia.

Table VI shows that at whatever age the same physical state occurred, the same mental symptoms were invariably present.

Table VII shows that certain cases with certain physical states tended to run the same mental course.

My reasons, then, for supposing that the train of symptoms such as I have detailed is intimately associated with and dependent on autotoxæmia as I have defined it are the following :—(1) The mental symptoms improve, and in time altogether disappear and recovery takes place with an improvement or disappearance of the morbid bodily condition. (2) With recurring mental disorder the mental symptoms differ if the physical states differ ; and this fact will account for the phenomenon which is often seen in asylums, several examples of which I have collected, of melancholia being cured by some intercurrent febrile disorder. (3) That if the mental disorder has been of some standing before the case has come under notice, and delusions of marked persecution have developed, showing a saturation of the brain with the products of autotoxæmia, or if the physical state is one of great gravity, as diabetes, recovery seldom or never takes place.

Dr. John Rose Bradford, F.R.S., in the course of his experiments on the pathology of the kidneys, some of which he discussed in his Gulstonian Lectures this year at the Royal College of Physicians, found that after extirpation, wholly or partially, of the kidneys, nitrogenous extractives accumulated, not only in the muscles and organs, but also in the brain ; that in consequence of this accumulation the cortex cerebri becomes more irritable and more unstable.

He conclusively proved that the kidneys when sound had some controlling influence over the metabolism of the tissues of the body, that with weakening or loss of this controlling influence through disease nitrogenous extractives accumulated in all the organs and tissues of the body, including the brain, causing not only profound autotoxæmia, but also with this autotoxæmia increased irritability of the cortex cerebri.

[The author here related a case which had lately come under his notice.]

In this case we have the history of a woman (2) whose mental disorder seemingly at first was only of recent date, but on deeper investigation we find that she was really suffering from depression, for the past five years unrecognised. Running parallel we have a history of an abdominal growth, proving afterwards to be renal tumour, going on during the whole of this period, practically effecting a gradual nephrectomy; then immediately after extirpation of the partially diseased organ—true nephrectomy,—the patient had a complete mental breakdown. Was the operation the cause of the insanity from shock? What was and is the insane state? Mental disorder was certainly present before the operation, so that the shock of the latter could not possibly have been the real cause. The cause must have been certainly the gradual nephrectomy that was going on. So long as the condition was of insidious onset so long were the symptoms slow in progression, to be brought to a sudden head, *i. e.* a sudden increased nervous excitability, by complete nephrectomy. The results of clinical experience are thus in complete harmony with experimental facts. This disturbance of tissue metabolism which is true of the kidneys might be easily conceived to be equally true of all the other glandular organs of the body.

Having, I trust, clearly shown then by experimental facts and clinical evidence that such a condition as "Deprimentia," as I have termed this mental derangement due to autotoxæmia, exists, it is only left for me to mention the other states of mental disorder which simulate it, and from which it is necessary to differentiate it. They are—

(1) Onset of general paralysis; (2) Depressional stage of alcoholic insanity, and other allied states, morphia, &c.; (3) Phthisical insanity; (4) Post-epileptic phenomena; (5) Hysteria; (6) Shock with acute stupor; (7) Post-febrile

depression ; (8) Cerebral tumour or abscess ; (9) Masturbatory insanity ; (10) Dementia pura ; (11) Puerperal melancholia ; (12) Insanity with syphilis ; (13) Feigned insanity ; (14) Reflex depression (?).

Bearing in mind the fact that the present taxonomy of insanity is in a most unsatisfactory state, and that a classification ought to have for its main object the revealing of the causes of disease so as to render it serviceable for statistical registration, I shall suggest for future use the following nomenclature, built up not only on clinical, but also on ætiological and pathological grounds.

Main Classification :

1. Autotoxic insanity.
2. Exotoxic „
3. Epileptoid „
4. Degenerative „
5. Hysteroid „
6. Congenital „
7. Feigned „

1. *Autotoxic Insanity or "Deprimentia."*—We may speak of (1) Diabetic deprimentia ; (2) Gouty deprimentia ; (3) Nephritic deprimentia ; (4) Catamenial deprimentia ; (5) Cardiac deprimentia.

2. *Exotoxic Insanity.* — (i) Pathogenic. — (1) Infective insanity : (*a*) Insanity with or following the acute specific fevers ; (*b*) Puerperal mania (probably of pyæmic origin) ; (*c*) Acute delirious mania (specific ?) ; (2) Phthisical insanity ; (3) Syphilitic insanity ; (4) Gonorrhœal insanity, mania of hydrophobia.

(ii) Toxinic.—(1) Alcoholic insanity ; (2) Metallic insanity (of lead, &c.) ; (3) Drug insanity (morphinomania, &c.).

3. *Epileptoid Insanity.*—(1) Idiopathic epileptic insanity ; (2) Hystero-epileptic insanity ; (3) Psycho-epileptic insanity : (*a*) Recurrent mania ; (*b*) So-called folie circulaire ; (*c*) Epilepsie larvée of the French.

4. *Degenerative Insanity.*—(i) General paralysis and its varieties.

(ii) Dementia pura (not symptomatic dementia, the terminal stage of most mental disorders).—(*a*) Senile changes : (1) Atheroma and its allied atrophic degenerations ; (2) Spino-cerebral pachymeningitis ; (*b*) Gross lesions ; (1) Tumour and

abscess (including gumma); (2) Traumatism; (*c*) Idiopathic brain wasting; (*d*) Chronic progressive meningitis; (*e*) Secondary to systemic nerve disease; (1) Locomotor ataxy with mental symptoms, &c.

5. *Hysteroid Insanity.*—(1) Hysteria gravis; (2) Moral insanity; (3) Masturbatory insanity; (4) Hypochondriasis and neurasthenia; (5) Acute mental stupor, catalepsy, trance, ecstasy, &c.

6. *Congenital Insanity.*—(1) Idiocy; (2) Imbecility; (3) Cretinism; (4) Paranoia (a doubtful condition).

7. *Feigned Insanity* (generally symptomatic only).

Let us look at the classification from another point of view. So far back as 1876 Dr. Maudsley, in his *Physiology of Mind*, writes:—"Whatever be the real nature of mind, *it is certainly dependent for its every manifestation on the brain and nervous system.*" And all psychologists hold to-day that the actions which take place in the nerve-cells, however produced, are the physical concomitants of mind. Physiologists and histologists teach us that the nervous system is composed of elements—the neurons—each neuron an independent unit in itself, not united to, but influenced in some way by its adjacent fellow. Let us ask ourselves, then, what are the conditions that would affect this independent unit, the neuron? They are—(1) Hereditary predisposition; (2) Congenital defect; (3) Arrest of development; (4) Plasmic influences due to (*a*) Autotoxic and (*b*) Exotoxic poisons; (5) Degenerations caused by traumatism, growths, age, &c.; (6) Innervation from adjacent neurons.

It will be seen that if the actions in the upper neurons which are supposed to have a restraining influence on the lower neurons be the physical concomitants of mind, these actions will vary as the physical conditions of the neuron vary.

We might divide these actions, then, into—

(1) Congenital.
(2) Autotoxic } Plasmic.
(3) Exotoxic }
(4) Degenerative.

The hereditary predisposition will account for the fact that some people go through life with all diseases and never become affected mentally, while others will break down early or late under the least indisposition and strain.

The conditions of arrest of development of the neuron and the power of innervation that adjacent nerve tissue has, might account for the other two divisions of the classification, viz. (5) Hysteroid, (6) Epileptoid, and finally we might add (7) Feigned.

The minute histological pathology of how these conditions affect the neuron, and so pervert its psychic function, whether it be that the toxins of the body manufacture are not so potent as the toxins introduced from without ; whether the former only temporarily paralyse the neuron in whole or in part only of its structure, why we usually get recovery with cessation of autotoxæmia, or whether the latter destroy the neuron, and thus, as in states such as those due to alcohol and other exotoxins, we more frequently get complete amnesia and dementia eventually, it is not the province of my paper to-day to discuss.

In conclusion I can only add that if it is possible to correlate mental disorder with bodily disease, it would be impossible to lose sight of such an important relation. In the early stages, when the disorder is more amenable to treatment than when it is fully developed, what good might be done. The great stumbling block to the advance of alienism in the past has been its separation from the domain of general medicine.

If the object of my paper to-day—the comparison of the correlation of the phenomena of mental disorder with the phenomena of bodily disease—has not been as fully proved as I should have liked, yet I shall rejoice if I have opened up only for discussion the subject of the mental taxonomy of to-day, a subject which in our speciality is in such an unsatisfactory state.

(1) Read at the General Meeting, London, 12th May, 1898. (2) This patient made a complete recovery. This emphasises the fact that with the removal of the *morbi causa* the mental symptoms improve or disappear. The remaining kidney is probably healthy, and is now doing the work of both.

The Waldstein Case at Prague: Two Letters addressed to the Members of the Medico-Psychological Association of Great Britain and Ireland. By Professor Dr. Moriz Benedikt, Vienna.

I.

Gentlemen,—The Waldstein lawsuit has aroused painful surprise here, and the conduct of the psychologists taking part in it has evoked so much astonishment in professional circles, that it will be worth our while to subject it to a critical analysis —as follows:

1. The relation of mental weakness to moral insanity.

2. The danger of creating class legislation by a wrong conception of moral insanity.

3. The question of bringing lunacy under State control.

To make things clear I will recall to your recollection a certain lawsuit which took place at Vienna some time ago, which shows very clearly the danger of a stupid sense of justice springing up in certain sections of society.

A certain Baron Ulm, between sixty and seventy years of age, settled a certain sum of money on one of the *demi-monde* (Windisch). The Baron's family would not recognise the debt, and—through one of those legal tricks which are only too common in Austria—Windisch was prosecuted for fraudulent solicitation, on the ground that she must have been cognizant of the Baron's mental weakness.

As chief expert the late Professor of Psychology, Ludwig Schlager, stated his opinion that Windisch had formed this remarkably correct diagnosis, and the learned bench gave sentence in accordance with the medical evidence. According to Schlager, insanity is self-evident to an ordinary street arab; and on the evidence of this specialist, a person was condemned after prosecution in order that a family might be relieved of the payment of a just debt.

The Waldstein lawsuit also owed its origin to a legal quibble used to substitute a criminal for a civil action. The Count Waldstein, deceased, hated his own family, and left the city of Vienna and certain friends amongst the municipal officials the bulk of his fortune. The offended relatives, and also apparently

the public prosecutor, came to this conclusion,—"that a nobleman who wills away his property to the *bourgeoisie* cannot be right in his mind." Physicians who had attended him, and particularly the proprietor of a Viennese asylum, after examination, incautiously in open court declared him to have been insane.

The first argument was that the young Count would never learn. There are insane persons who develop an extraordinary eagerness to learn, and sane children who will learn nothing. Temperament and sense of duty rule in this matter. Only the imbecile learn nothing from purely intellectual defects. Young Waldstein was a count, and in aristocratic circles the family tutor possesses neither the authority nor powers of discipline to curb a lively disposition or to stimulate a proper sense of duty. Secondly, there was his aversion to his mother. This was certainly a blot on the character of the son. But, as counsel for the defendants explained, the lawsuit itself vindicated the deceased intellectually. Thirdly, that the Count caused the lawyer to draft a letter to his agent. Whoever possesses any knowledge of business is aware that this proceeding is recognised, even in the higher political circles of society, to be completely justifiable.

As further evidence of imbecility it was alleged that the Count had described the Austrian Parliament as a "circus." This expression is certainly disrespectful; but, nevertheless, it is decidedly witty, for, from one year's end to the other, do not our members of Parliament ride their several hobbies one against the other to the detriment of the country?

In quite a childish way the Prague psychologists employed in court "went on the hunt" to find out whether the Count allowed himself to be influenced, in order to draw therefrom conclusions of insanity. Maniacs cannot be influenced, nor those suffering from delusions, nor the completely deranged imbeciles, nor those whose ideas of morality have become warped. The weak-minded and obstinate are difficult to influence.

The normal individual is, like "clay in the hands of the potter," influenced by education, literature, family surroundings, public life, &c. The higher phase of impressionability is most valuable in the sphere of thought, research, and creative intellect. Was Mozart weak-minded because he allowed himself to be influenced by Haydn and the Italians, or Raphael because

he permitted himself to be influenced by Perugino? Are not judges influenced by the depositions and evidence of witnesses? A psychologist might ascribe to the late Count odd caprice, but not waxen pliancy of will. It is incontestable that a woman, though of limited ability, has more psychological instinct than an average intelligent man. Further, it is a psychological fact that an intellectually gifted girl or woman may love a man not so endowed, though deserving of esteem for other reasons. But, up to the present, no sensible girl or woman has loved one born weak-minded. No one doubts that Fräulein Pasqualine Metternich was an intellectual girl of the highest order, and it was stated on all sides, besides having been proved by her letters, that she was much attached to her *fiancé* and husband.

And how many psycho-pathological points of a technical nature had the cultured Princess Pauline Metternich opportunity of observing? So far from recognising him as insane, she welcomed him as her son-in-law with unfeigned joy. It is an undoubted fact that the deceased Count was an individual of average intellect, of amiable manners, with all the faults as well as all the privileges of humanity in his social rank of life. He knew how to manage his own affairs well, and how to protect himself against the repeated attacks of his family. His disposition was capable of enduring friendship or aversion, and therefore not weak. He was so energetic that he gave his antipathy (which for one of his position was unusual) to his own family practical shape in his will.

Most assuredly the psycho-pathologists employed in this case were wrong in having disputed the testamentary ability of the deceased on the ground of insanity, and in stating that the defendants were able to recognise mental weakness, and had thus obtained money by fraud. The presiding judge, in his summing up, drew attention to the point that weakness of mind does not altogether disannul testamentary ability; but this disclosure appears to have been made only at the last moment, otherwise the court would have been obliged to dismiss the case at the outset.

It was generally thought surprising that psycho-pathologists had expressed the opinion that the defendants must have recognised insanity in the testator, whilst his most distinguished associates remarked no signs of it. If ministers, governors, diplomatists, generals, bankers, well-known advocates, and

notaries failed to notice it, how can it be scientifically maintained that a difficult diagnosis like this could be affirmed by specialists?

We must recognise a serious deficiency in the culture or intellect of many psycho-pathologists; they are no psychologists. Many of them have studied "scientific" psychology, but have not a real knowledge of human nature.

True psychological knowledge is to be sought for in the ranks of poets, historians, teachers, and authors. So long as psycho-pathologists possess a merely superficial knowledge of human nature, so long will they incur the risk of describing human souls after their own fashion, and of stupidly regarding the sane as mentally unsound, and *vice versâ*.

Count Waldstein liked brandy, but only one witness—who did not belong to his household—had ever noticed anything of this. The rest of his acquaintances were astonished to learn it then for the first time. The Count neither drank in society nor was ever seen drunk. Does that constitute a tippler from a psychological point of view?

The Count had an enlarged liver, and succumbed to hepatic cachexia. The conjecture that the disease of the liver may have had some connection with the brandy is allowed, but is it proved?

As there were no other pronounced alcoholic symptoms except degeneration of the liver and its consequences, it is certainly not permissible to treat an invalid as a drunkard, or to come to a conclusion that any organ—one of which might, of course, be the brain—was diseased by alcohol alone.

I hold that the decision of the Viennese psychologists, during the session of the College of medical men, was distinctly hazardous. And for this reason. It declared that if Count Waldstein had committed murder he would have been deemed irresponsible. Why should he have been unaccountable for his actions? Because he tippled in secret? Then at once throw open all the prison doors in the world! For how many ordinary criminals are there in the world who not only tipple, but tipple often and secretly!

As regards his mental weakness, that, as a rule, has no absolute reference to crime. The weak-minded may be *homo nobilis* as the most genial may be a born criminal. There are categories of criminals who are weak-minded—such as incendiaries,

—but they are not incendiaries because they are weak-minded. There are other psychical factors which must be considered, such as temperament and moral perception. All testimony which alleges insanity as an argument for wrong-doing must be looked upon as open to doubt from a scientific point of view. If the particular grade of intelligence cannot discern the material consequences of a criminal deed either to the criminal himself or to others, then it ranks as imbecility or some other brain trouble. But no one could ever be considered a born lunatic or eccentric who was qualified to be an officer, a crack sportsman, a correct steward in a position of trust, the successful suitor to a lady of position, the esteemed colleague of ministers, diplomatists, bankers, and distinguished lawyers.

I recommend certain celebrated psychologists, as well as those who are yet unknown to fame, to read the articles of Grillparzer on "Poor Spielmann," from which they will gain a better insight into the connection of insanity with morality than they can obtain from their own text-books.

II.

I have long suffered some anxiety lest, owing to a certain prevalent haziness in scientific knowledge, a class legislation might be created, an evil which really already threatens us. For instance, if anyone belonging to the upper strata of society commits a crime or leads a dissipated life, detrimental to the interests of his family, the impression generally gains ground that a psychological inquiry should be instituted. Probably the result is that moral insanity as well as perhaps a low order of intelligence is diagnosed, and that testimony in favour of irresponsibility is declared. In legal circles particularly this has become quite an accepted *modus operandi.*

The quarantine of the delinquent in a private asylum until the affair has blown over is then resolved upon. The indictment is thus shelved. Two years ago I communicated my fears to Baron von Krafft-Ebing, and represented that if psychopathologists were to study the question in prisons they would soon come to the conclusion that one must advance the same testimony in favour of the great majority of professional criminals, and either let the whole crew loose on society or have them transported to asylums.

I gained the impression, however, that I had not turned my

attention in the right direction. There are here the same conditions as in the question of hypnotism, where also looseness of criticism and practical skill opens gate and door to every folly, delusion, and eccentricity. I perceived that not in Vienna, but in some foreign country, I should find the solution of this intellectual and moral problem.

First I tried Brussels, and the note of warning which I sounded there still tingles in the ears of psycho-pathologists and masters of forensic science.

Where is the proper place for a person who, as we presume, suffers from an innate perversity of sexual instinct? Does he deserve freedom? Certainly not. At liberty he is a social danger. Should he be in an asylum? Certainly not. It may be that the individual in question is not only more highly gifted, but perhaps even more sensible than his medical or administrative protectors. The place for such a person is the house of correction, and in solitary confinement, for he is even more dangerous to his companions in prison than to those at liberty. For him we can have about the same sympathy as we might feel in shooting a favourite dog that had gone mad, to avert whose fate would be to inflict a wrong on mankind.

Society rightly demands chastity, and punishes offenders by social means. Education and morality should raise the strength necessary to resist temptation. Penance as practised in the Christian middle ages, which has now become incomprehensible to us, had doubtless its origin in a wrong moral conception of sexual relations; although we physicians advise no one to go into monastic seclusion, still we dare not pose as the advocates of unbridled licence.

Now-a-days we have a new danger. I know that the publication of obscene and criminal literature in popular form has caused you great annoyance. Your anger was what might be called "gentlemanly ethical." But such publications are dangerous from another point of view. When describing deliberate methodical seduction, the profligates pose as victims of an innate impulse, which is made the excuse for irresponsibility. Such arguments are plentiful on the stage of any European theatre, but from a literary or ethical standpoint they have no justification. An impartial judge would send these persons to prison, and sentence the selfish for a shorter period than the dangerous victim of an "innate uncontrollable impulse."

At the Antwerp Congress of 1890 I was present when Professor Jules Morel, of Ghent, made the remark, in private conversation, to that celebrated lawyer and minister of justice, Mons. Le Jeune, that in Belgium perverse sexual excesses were increasing to an alarming extent.

I told him that the police everywhere constitute a wall of protection between sexual delinquents and justice ; and for this reason, that these are frequently found amongst the higher ranks of society. If such an individual seeks another domicile, during the summer for instance, the particular police officials whom it may concern are duly informed, but the fact is not mentioned to the public prosecutor. It is not part of our duty to criticise this international custom here. Then in many places official medical examination is prescribed in order to prove the irresponsibility of the patient, and the troublesome one is either sent abroad for some weeks or "towed into the port" of a private asylum to find rest there. On this account it is now an urgent necessity to make the care of the insane a State question. I appeal to my colleagues not to misunderstand me, and think that such misdeeds multiply indefinitely. That which applies to offenders against morality applies to crime of all kinds.

It is urgently to be hoped that the unfortunate expressions—*moral insanity*, *folie morale*, and *moralisches Irresein* will disappear from the vocabulary of science. They are erroneous, and have misled physicians and jurists. So-called moral insanity is nothing but innate or acquired depravity (corruption), and represents, without further complication, no form of insanity. It is an altered physiological and anti-social condition which may be natural or acquired, but is not a disease ; and it should be specially noticed that under favourable development the natural or innate condition may remain latent. Such persons possess the full measure of intelligence to regulate their family and business affairs ; and, with the exception of the special aberration, to conduct themselves in a laudable manner.

After the Eastern fashion we require to keep the three principal aims of penal law before us. The first and most important to determine is what, in the sense of social order, must be looked upon as *right* and what as *wrong ;* the second is to render the offender harmless ; and the third is the possible reformation of the criminal.

On these points physicians will surely agree, and will not

fall into a trap because the law everywhere speaks the perplexing language of moral-philosophical hypothesis. The physician will not wish to "vindicate." To "vindicate" is the affair of the legislature and of the judge.

In many countries it is first of all expedient to bring all the insane under the control of the State, in order to counteract existing abuses. I appreciate worthy men who own private asylums, and it is painful for me to offend many upright colleagues by advancing my opinion. But that kind of uncontrolled private enterprise leads to improprieties. I do not belong to the modern school of enthusiasts, who wish to bring everything under the control of the State, but with regard to insanity it must be urged that this is necessary. I could quote a long list of cases that have come under my notice to prove the necessity of State control, but on that point at least I shall keep silent as long as I am not compelled to speak out.

In my personal experience as a medical man I have seen the prognosis for many perverts grow worse under the influence of narcotics for years, both as regards duration and cure, especially the melancholic and hysterical cases.

At the Psychiatrical Congress at Antwerp (1885) I drew attention to this point in presence of our much honoured friend Hack Tuke. What a serious mistake for the patients it was to do away with the mechanical strait-waistcoat, and put in its place a dangerous toxic restraint!

To control this convenient toxical strait-waistcoat in private asylums is a difficult matter, particularly in those countries where a feeling of leniency exists regarding abuses, and quite the reverse towards a positively tense sense of justice. It also happens that principals of public asylums are, for various reasons, enthusiastic *empoisonneurs*, ready to make use of every new drug; in public institutions, however, not only is control easier, but literary criticism better deals with blunders.

Gentlemen, I have told you why I so highly value your esteem, and why I am a disciple of the British school,—because it demands that a scientist must first of all be a gentleman, not only in sentiment but in behaviour, doing right without regard to personal opportunity. I know that my "call to arms" against class legislation will find a powerful responsive echo on both sides of the Atlantic. But the official medical world in my native country does not appear to know

that I speak with authority in the international world of psycho-pathologists; and this coterie, strange though it may appear, has not only the ear but the arm of the law completely at its disposal.

Further Research on the Formation of Axial Fibres in the Brain, by Dr. Paul Flechsig, Dr. Döllken, and Dr. Nissl. A Digest by W. W. IRELAND, M.D., Mavisbush House, Polton.

DR. FLECHSIG.

IN a reprint from the *Neurologisches Centralblatt*, No. 21, 1898, Dr. Paul Flechsig gives us some further investigations on the development of the fibres in the human brain. In his examinations he has used forty-eight hemispheres belonging to twenty-eight brains of all periods of early life, from the fœtus of seven months to the child of fifteen months. He thus sums up the results to which he has arrived.

1. The development of axis-cylinders in the lobes of the brain follows the same laws of growth and time of growth as in the spinal cord, the medulla, the cerebellum, and the middle brain. Flechsig observes in a note that the processes have a regular course, and not at random, as some observers have stated. This is owing to faulty preparations and inability to follow the complicated course of the nerve-fibres.

2. It may be stated that nerve-fibres having the same functions get their axis-bands about the same time, whereas dissimilar systems have their own times. But it is to be borne in mind that collateral fibres attain their full growth later than those of the main stems.

3. From which it follows that systems of fibres which are separated in their development by considerable intervals of time cannot fulfil the same special functions. As examples of this take the radiating fibres of the second parietal gyrus (29, Fig. 1) and the posterior median gyrus of about three months.

4. The fundamental law comes out most clearly in premature births which have survived for some time ; for example, in the seven months' child who has lived for one or two months. In these cases the anatomical character of the nerve-fibres is more apparent than in embryos arrived at the full time.

Dr. Flechsig's previous inquiries had been made upon cases of early birth who had remained longer in life.

These observations form the counterpart to Gudden's experiments. The latter sought to destroy the sensory functions in new-born animals, and note the effects upon the development of the nerve paths of conduction. Flechsig found that the early function hastens growth, and this effect is more noticeable upon the sensory conducting or projection systems than upon the association systems.

5. The new formations in the cerebral lobes begin from two and a half to three months before normal mature births. The first systems to appear are the radiation of the fillet, the olfactory tract, and the sensory conducting tracts. Scattered axial fibres do not occur in the cerebral lobes. The development of the axis-bands progresses in distinct places ; the intervening spaces are clear of these axis-bands. To hold that the association fibres are developed at the same time as the projection or conducting fibres is the result of faulty observation.

6. The cortex becomes developed in a great number of zones. Every tract is distinguished by the particular time in which its nerve-fibres are developed, and each has in its leading connections certain peculiarities ; the number of these fields is far greater then he at first recognised, the differentiation of the cortex is much finer, and distinctions in localisation are much more numerous. He now distinguishes forty fields of historical development, while before he could only make out nine (five sensory and four association centres). This increase is principally owing to a further dissection of the association centres and the discovery of two more sensory centres. The learned professor does not even think this number final ; more may yet be distinguished. These divisions are natural, not artificial ; some of them represent special functions, as a glance at Figs. 1 and 2 will show. Field No. 1 covers Charcot's motor zone ; field No. 5 covers the visual sphere, as Vialet has rightly defined it. We cannot show that all these fields have



Fig. 1.

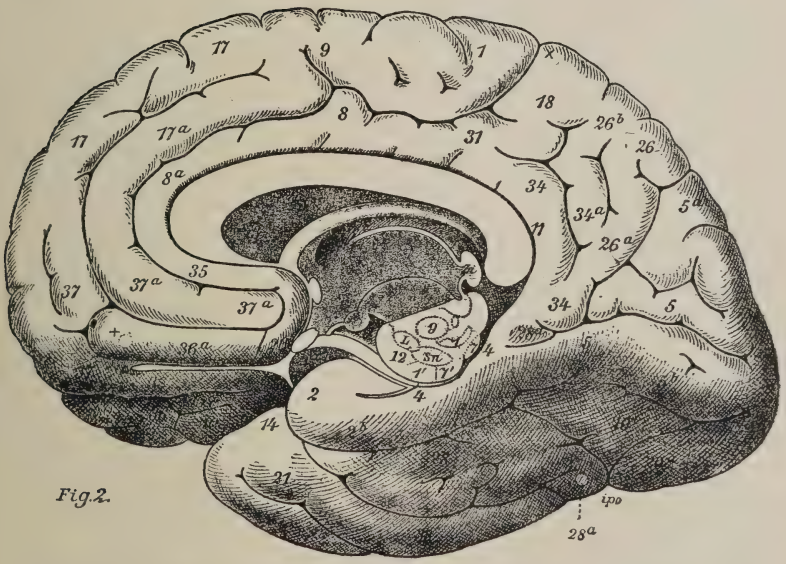


Fig. 2.

Fig. 1 represents the human brain on its outer aspect, Fig. 2 from within and below. The numbers denote the sequence in which the bundles of the axial fibres of the cortex appear in compact or loose form. The letters indicate special segments within the several fields, the significance of which will be further explained in my extended work. Nos. 26, 26 *a*, 26 *b*, form a single cortex field; likewise Nos. 33, 33 *b*, &c.

To illustrate Dr. IRELAND's Paper.



special functions—are organs in the sense that Gall assigned to certain portions of the cortex. The number may appear to be suspiciously large; but it must be observed that by far the most boundary lines which Figs. 1 and 2 represent are to be regarded as typical tracts of fibres in the fœtus; that is, as bounded tracts of fibres with axis-cylinders, and sometimes without any, which persist during a certain period of development.

Dr. Flechsig divides the fields in the cortex into three groups: (*a*) Primordial areas, which are regularly formed before maturity (1—8, Figs. 1 and 2); (*b*) Intermediate areas, in which the axis-cylinders begin to be formed one month after normal birth (9—32); (*c*) Terminal areas, in which the axis-cylinders appear later than one month after birth (33—40).

The primordial areas are comprised within the sensory centres of my former division. The terminal areas are all parts of my association centres. The intermediate areas belong partly to the sensory centres, partly to the association centres. The formation of the axis-cylinders in the terminal area in healthy growth begins in from four to four and a half months later than in the primordial area. Flechsig has observed the first axial fibres in the terminal areas at Nos. 38 to 40 in a child born at the full time, who had lived for seven weeks.

The sensory centres are to be found in the primordial and secondary areas. In the first category are the median gyri, especially the posterior ones, the lips of the calcarine fissure and the occipital convolution, the gyrus uncinatus, the internal orbital, the cornu ammonis and the subiculum, the gyrus fornicatus, especially the middle third, and the cross convolutions of the parietal lobe.

Within the terminal area I distinguish eight parts; the first and second frontal gyri, the lower parietal gyrus, the second and third temporal gyri, and one piece of the gyrus fornicatus. These are the parts of the cortex by which the human brain is principally distinguished from the brains of the anthropoid apes. They also give the typical form to the human skull. The third frontal gyrus, however, does not belong to the terminal area.

The intermediate areas are developed in a time between the primordial and the terminal. In the mature infant the axial fibres are already fully formed. The first developed intermedial

areas are secondary sensory centres; the later ones he names the border zones of the sensory centres. These always adjoin the centre with which they are intimately related, but do not appear to have direct connection with other sense centres. Projection fibres come into these zones more scantily than to the sense centres, and are, as it appears to me, more irregular; the majority of them are of corticofugal nature. To the secondary sensory centres belong the foot of the first frontal (No. 9), the orbital portion of the third frontal (No. 10), the foot of the third frontal (No. 12), and the gyrus subangularis (No. 13). In the border zones are the posterior part of the first temporal, No. 23, and the anterior third, No. 21; also 29 and 22. The development of the first frontal gyrus takes place in four periods; of the third frontal in three. In the third frontal gyrus the pars triangularis is developed in its axis-bands at a different time from the pars orbitalis and opercularis; the pars triangularis belongs to the intermediate area which ripens late; the pars orbitalis belongs to the primordial sensory centres.

The development of the second parietal is in four fields. The first, a small secondary centre (No. 15), is in the operculum, a posterior portion passing to the second occipital gyrus (No. 22), one adjoining the middle third of the posterior median which makes up the most part of the gyrus supra-marginalis (No. 29), and the lobulus parietalis (No. 39). Only the last is in the terminal areas.

Nos. 22 and 29 are to be found in the gyrus angularis of the lower apes. In the anthropoids, judging by the naked eye, No. 29 is much more conspicuous; 39, on the contrary, is either wanting or only rudimentary; the bridging of field No. 22 to the middle part of the second temporal gyrus (partly a border of the auditory sphere No. 25), forms a spur (33), which I also miss in the brain of the anthropoids. This convolution fuses more or less with the gyrus subangularis and the first temporal gyrus in badly developed human brains. Flechsig adds in a note that in Helmholtz's brain, Nos. 39 and 33 are markedly differentiated. Between the first temporal gyrus and the gyrus subangularis there are two distinctly separated convolutions, whilst in the badly developed brains hardly any of these convolutions can be made out. The gyrus subangularis can be recognised through its peculiar construction in the chimpanzee.

Nos. 33 and 39 are interesting pathologically as being involved in all cases of pure alexia without hemiopia. The professor supposes that the reason why monkeys cannot form a language, is that Nos. 33 and 39 are wanting in their brains.

The precuneus is formed in four cortex fields, which are specified as Nos. 34, 26, 31. The insula is also developed in four fields. The primordial areas have an especial structure, so that a practised observer can distinguish sections from each of them. In the development of the fibres of one field the different categories develop in regular order, one after the other; in one row of the field projection fibres begin their axis-bands, in another the association fibres do the same, so that one can already divide the fields into projection and association centres. In no case do the fibres of separate categories reach their full development at the same time.

The direction of nervous conduction can be known with great certainty from the direction of development. The primary system of the primordial area develops from the lower cerebral ganglia towards the cortex. This is especially noticeable in the primary optic tract; for example, in a child born from one and a half to two months too early, yet who has survived twelve days, axis-bands were only to be found between the outer corpora geniculata and the cortex. All primary systems of the primordial area are from the direction of their development to be regarded as corticopetal.

It is in the terminal area that, as a rule, the axis-bands first appear in the immediate neighbourhood of the cortex. The primary system also here takes the lead with corticofugal axial fibres. This is not the case with the projection fibres, which do not take a primary development, but only grow out of the cortical regions until the sensory, *i. e.* corticopetal, fibres have got their axis-bands. This also holds good with the fibres of the trabs, which are now only noticed in some sections.

Though the order of development of the axial fibres generally observes a given sequence, Dr. Flechsig has found important variations in different brains, some of which he specifies. Though in the majority of infants the fibres of the optic tract in the corona radiata receive the axis-bands sooner than the auditory tract, in an infant of eight months' gestation who had survived birth there were found axis-bands in the auditory tract and none in the optic tract. Other variations are noticed in

the growth of the fibres through the medulla, pons, and corpus striatum.

Dr. Flechsig observes that with such variations it is in no way surprising that a bundle of fibres should be observed to take a different course from what he has described.

In reply to the criticisms of his opponents, Flechsig observes that there are two separate questions. Do the centres which he describes exist? and has he accurately defined their boundaries? These boundaries he has several times had occasion to alter, and may do so again. He has now divided his old association centres into border-zones and middle fields, and he recognises that some of them are furnished with projection fibres, for example No. 15. He thus pursues his argument: the fibre systems in the greater part of my older association centres develop at least three months later than those of the sensory centres which belong to the primary group of the primordial sensory centres systems. Nerve-fibres which take their growth at such intervals of time can never have the same functions. As the function of a mass of grey matter is exclusively determined through its relation to the paths of conduction, we may be sure that those portions of the grey matter which are connected with the tracts of nerve-fibres at such different times must have different functions. Dr. Flechsig tells us that it was in examining the growth of the fibres in the spinal cord and medulla oblongata that he gained confidence in the prevalence of the laws of development, and discerned that there are different regions in the brain. In his new terminology this view is thus stated: by the law of development the terminal regions of the brain must have quite a different relation to the whole organism from the primordial ones. He observes that he has succeeded in demonstrating paths of conduction from several sensory centres, for example from that of bodily sensation and the visual sphere in No. 39, and from the auditory and visual sphere in No. 38. He observes that the fasciculus longitudinalis inferior, upon whose nature as an association band the school of Wernicke base their notions of the structure of the brain, is partly a primary visual radiation and partly belongs to the projection system. Flechsig now holds that the cingulum, which he at first supposed to be a direct association system of several sensory spheres, mainly belongs to the projection system. He observes that the cingulum is well developed in the lower

mammalia, in which we would scarcely look for extended association systems. The professor thinks that there is no choice either to assign the conjunction of the various sensory spheres to the thalamus opticus, or to several regions to the cortex which stand in connection with all or most of the sensory spheres. He observes that the optic thalamus is different from other internodes of the sensory conducting tracts like the corpora geniculata externa or the olfactory bulb. It is a much more complicated apparatus, which contains six parts, all distinct in the time when the nerve-fibres acquire their axis-bands; while other ganglia, for example the globus pallidus, are developed all at once. The nuclei of the fillet form only a small part of the thalamus, and many cortical fibres radiate into it which part into end branches, and lead from the cortex, as Kölliker has already pointed out.

The direction of the development of the fibres issuing from No. 39 is a corticofugal one, from which we may guess that these fibres lead to the thalamus, especially as they do not join in with the connections of the nucleus of the fillet. Flechsig considers it an important question whether the associated impressions of the muscular sense with sight and feeling reach the cortex through the thalamus in distinction from the single excitation through the corpora geniculata, &c.

Little stress can be laid upon the study of secondary degenerations where Flechsig's topographical discoveries have not been at the same time borne in mind.

In the text and in the notes the professor replies to his opponents, Monakow, Wernicke, Siemerling, Dejerine, and others, or denounces their descriptions of the histology of the brain as misleading.

We do not reproduce those controversial passages, as the objections combated are rarely cited with sufficient detail to enable us to grasp their full import, nor have we access to most of the papers in which these criticisms are made.

Against Monakow he urges that, as the Russian pathologist does not admit association centres he must spread the sensory centres over the whole superficies of the cortex, and divide the parietal lobe between the muscular sense and visual spheres. He has to strain the significance of pathological observations in order to make out that the gyrus angularis belongs to the visual sphere. As a proof of this Monakow gives out that

after destruction of the whole inner flat surfaces of both occipital lobes, the maculæ luteæ still retain their functions, and that there is only a contraction of the field of vision, forgetting that in the cases which he cites in proof there are portions of my visual area still intact, viz. the cuneus, the gyrus lingualis, and the first occipital. After a still more simple fashion Monakow places the muscular sense in the parietal gyri. The fillet as the especial bearer of the muscular sense is assumed to spread out into the whole parietal lobe. As a proof of this he cites the case of Hösel-Flechsig, in which the upper fillet was almost totally degenerated, not because the posterior median convolution was destroyed, but because the whole axial fibres of the parietal lobe were implicated (*Hirnpathologie*, S. 260). Flechsig adds: "As I myself have investigated this case and have preparations of it, I can certify that the parietal convolutions did not show alterations up to as much as a half-centimetre on the anterior border." Flechsig thus goes on: The upper fillet terminates solely in the central convolutions, though exceptionally in the upper and anterior portion of the first parietal. Disturbances of the muscular sense are generally found in lesions of the central gyri. Monakow acknowledges that the auditory sphere is confined to the first temporal gyrus, in view of the fact that there is no secondary degeneration of the corpus geniculatum internum after disease of the second and third temporal and the occipito-temporal gyrus. In two brains which Flechsig has examined he found that the left auditory radiating tract between the corpora geniculata, the thalamus, and the cross convolutions of the temporal lobe, seemed to be twice as large as the right. Further investigations may determine whether this observation furnishes a key to the use of the left auditory sphere for the acoustic apprehension of words. It so happened in both cases that the border zone No. 25 was provided with axis-bands on the left and not on the right. I have never observed marked asymmetries in the optic tracts. Considering the objections against the existence of the association centres with a small development of the projection system, Flechsig says that the great majority of observers base their views about the distribution of the fibres of the brain upon sections coloured after Weigert's method. These are principally sections of the brains of animals. The data are transferred to the brain of man with-

out considering the differences, but an attentive examination of the brain of a rodent, for example of the marmot, has shown me that even in this brain there is not an equal distribution of the corona radiata in all parts. One finds between sensory centres rich in radiating fibres, small areas which are distinguished through their enormous richness of ganglion cells on the one hand, and through the almost entire want of radiating fibres on the other. Here the cells are much more abundant than anywhere else, and each of these areas is through intracortical association fibres connected with at least two sensory centres. This also goes to show that the cortex is not of the same structure throughout.

Flechsig states that he possesses sections of the brains of dogs and rabbits coloured by methylene blue, which clearly show that even in these animals the cortex is not all of one pattern.

Dr. Döllken. (1)

At the end of Professor Flechsig's communication, Dr. Döllken states that he examined forty-five complete sections which he made in frontal, horizontal, or sagittal directions through the brains of dogs and cats. The sections were coloured after the Weigert-Pal method. The brains examined were from newborn animals to thirty-five days old, two months, three months, and full grown. He found in the brains of these animals a successive development of the axis-cylinders in the paths of conduction. Axis-bands were not found to occur either solilary or scattered; but it was constantly observed that the axis-bands took their growth in bundles or layers. Before the fifth or ninth day he could observe no axial fibres in brains of these animals; but after the ninth day the axis-bands were seen in the cat's brain in the following structures:

1. Bundles from the inner capsule to the gyrus coronalis and the gyrus cruciatus, anterior and posterior, representing the median convolutions in the human brain.
2. Tractus olfactorius.
3. Fornix longus.
4. The upper part of the commissure of the cornu ammonis.
5. A layer of the cornu ammonis passing into the gyrus hippocampi (a part of the alveus).

After ten or eleven days axial fibres were observed—

6. In a part of the cingulum.

7. A thin bundle from the inner capsule to the gyrus ectosylvius posterior.

8. The anterior portion of the fourth and third gyrus arcuatus.

On the thirteenth and fourteenth days axial bands were observed—

9. In a small layer in the middle part of the gyrus marginalis.

10. In a bundle from the inner capsule into the gyrus ectosylvius posterior.

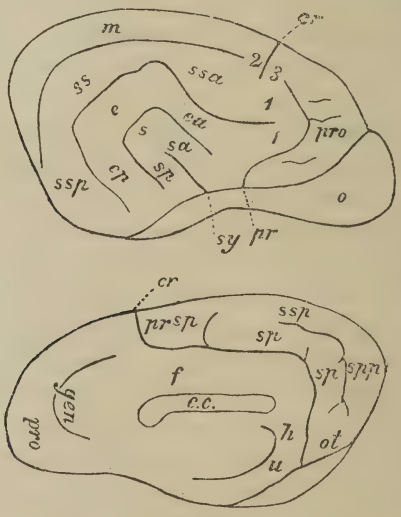
After fifteen or sixteen days axial bands were formed in—

11. A bundle from the corpus geniculatum externum to the posterior part of the gyrus marginalis and the gyrus postsplenialis.

On the nineteenth day begin to become mature—

12. The middle third of the trabs.

13. The dark portion of the anterior commissure.



Schema des Hundegehirns.

sy. Fossa Sylvii. *pr.* Fissura praesylvia. *cr.* Fissura cruciata. *ot.* Fissura occipito-temporalis. *gen.* Fissura genualis. 1. Gyrus coronalis. 2. Gyrus cruciatus posterior. 3. Gyrus cruciatus anterior. *o.* Lobus olfactorius. *s.* Gyrus sylviacus (ant. u. post.) = 1. Gyrus arcuatus. *e.* Gyrus ectosylvius. *ss.* Gyrus suprasylvius. *m.* Gyrus marginalis. *pro.* Prorea. *cc.* Corpus callosum. *f.* Gyrus fornicatus. *h.* Gyrus hippocampi. *u.* Uncus. *sp.* Gyrus splenialis. *pr.sp.* Gyrus praesplenialis. *ssp.* Gyrus suprasplenialis. *spp.* Gyrus postsplenialis.

In the dog on the ninth day there is nothing in the brain having axial fibres save the gyrus coronalis, the gyrus cruciatus, anterior and posterior, and the path leading to them from the inner capsule.

The histological development of the fornix longus begins at the eleventh or twelfth day; it also begins in the upper part of the commissure of the hippocampus; in a path from the inner capsule to the posterior and under portion of the gyrus marginalis and in the upper part of the fourth and third gyrus arcuatus. On the fourteenth day bundles appear which pass from the corpus geniculatum externum into the gyrus marginalis and post-splenialis.

From the seventeenth to the twentieth day are provided with axis-bands the middle third of the trabs, and somewhat later the anterior third of this structure. The fibres of the trabs mostly issue from the middle side of the prorea, from the gyrus cruciatus, anterior and posterior, and from the gyrus coronalis.

The development of the axis-bands in the dog is generally one or two days after analogous parts in the cat, but the order and sequence are the same. The bundles mentioned can be easily traced. The association fibres obtain their axis-bands between two convolutions from the eighteenth to the twentieth day in one part of the sphere of bodily sensation, gyrus coronalis, &c., and perhaps about the same time in the optic tract. In animals destitute of convolutions, like the rabbit, the rat, the mouse, and the guinea-pig, the development of the axial fibres takes a similar order though a different time. In dogs and cats the nerve-fibres in some of their brains are fully developed two or three days earlier than in other animals of the same species.

From the eighth to the eighteenth day there are only seen isolated systems of fibres in the brain, and they obtain maturity in bundles as far as I can ascertain, always in the same order.

Dr. Nissl.

It is apparent from Flechsig's own papers that the publication of his views has aroused considerable opposition in Germany, and this will not be lessened now that instead of nine he claims forty cortex fields, the development of which he has made out. Flechsig's leading idea is that in watching the development of the axial nerve-fibres he has found a key to the functions of the brain, and that by observing the connections of

the different masses of grey matter he may guess what special functions they also perform. To make a thoroughgoing criticism of his investigations one would require to follow his dissections on the brains of infants, and this is not easy. Trusting to his methods, the professor goes far ahead of clinical and pathological observations, which he assumes will follow after. Naturally it is easier to criticise his inferences than his facts.

In a paper in the *Monatsschrift für Psychiatrie und Neurologie*, Bd. iii, Heft 2, Dr. Franz Nissl remarks, "I have convinced myself of the impossibility of giving in short and clear terms a sketch of Flechsig's Psychiatry in *Gehirn und Seele*. I can subscribe to every word of Sachs when he says what Flechsig brings forward as psychological and psychiatric inferences is in part so superficial, in part so obscure, that there is no gain in considering it. There is such a confusion of all possible things that to try to arrange them would be more difficult than to follow his anatomical data."

For myself I may say that it is sometimes not easy to reach Flechsig's meaning; but I should not have taken so much trouble to render his observations into English unless I had believed that they contained something of value. In vigorous terms Nissl objects to the assumptions of the learned professor of Leipzig, and seems especially dissatisfied with his two separate "think-organs," the one in the front brain, the seat of the feeling of personality, the other behind, the seat of mental productivity. He observes that Flechsig assigns this *rôle* to the front brain for no better reason than that he finds the area in question in close relation with the olfactory sphere and the sphere of bodily sensation. Nissl denies that in general paralysis those parts containing the think-organs are especially affected. He questions the correctness of Flechsig's observation on the finer structure of the cortex, and promises to show in another place evidence for this condemnation. He observes that had Flechsig studied the cortex with the elective method of examining the nerve-cells, he would have avoided some errors. Had he done so he would have recognised the motor cells in the well-defined area of the so-called motor centre as of the same kind as the cells in the spinal cord of man, of the frog, and of the lizard; he would not have spoken of the granular layers in the visual sphere, still less have compared

them with the granular layers in the retina. Nissl observes that while Flechsig gives sharp boundaries to his localisations on the surface brain, he might have noticed that the different layers in no way trouble themselves about his boundaries.

(1) *The Mature Development of the Conducting Nerve-paths in the Brain of Animals* (a preliminary communication). By Dr. Döllken, Assistant Physician to the Clinique for Nervous Diseases in the University of Leipzig.

Clinical Notes and Cases.

A Case of Juvenile General Paralysis. By A. Helen Boyle, M.D., Brighton.

C. V—, æt. 19, was admitted into Claybury Asylum on 21st December, 1894.

On admission, childish, undeveloped, skin pale and greasy, dark straight hair, and brown eyes. Height was 4 ft. 10 in.; weight 8 stone. She was well nourished, though not fat. Slight mammary development. Palate very high and narrow. Enamel of teeth lined transversely. General shape good. When she spoke, which was rarely and not spontaneously, there was hesitation and drawling. Her gait was shambling, and she dragged her feet, being liable to trip. The knee-jerks exaggerated; pupils regular, and reaction normal.

Mentally she had an imbecile appearance, and was simple and childish in manner. "She is very confused, stupid, and can hardly be got to answer questions at all. She does not know how long she has been here, but can count and multiply simple numbers. She cannot tell what day it is without long thought, and takes very little notice of what goes on around her. Emotionally she is indifferent and placid rather than happy when left alone, but when interfered with she is spiteful, and now and then screams at the top of her voice, though as a rule quiet (possibly this may be from headaches). She has no delusions as far as can be made out.

The *past history* as got from her parents is that she was healthy as a baby, had no rash except measles, and never had anything wrong with her eyes. She got over teething

well, with the help of teething powders, and had no convulsions. At school she seemed fairly bright and cheerful. About fourteen or so she left school, and took a place as a servant, where she was worked hard and only stayed three months, leaving because she felt overdone. Soon after she took another place, and in four months became ill, was dull, and could not walk as well as usual, and came home. When at home she had a fit (aged sixteen), after which she was in bed, and had to be taken to the infirmary, where she was kept about four or five weeks.

Subsequently her walking and her dulness became worse. She complained a good deal at times of pain in her left arm, which she used to rub, and also of some difficulty in swallowing. Her speech was noticed to be peculiar about one year before admission, *i. e.* at eighteen. Her character was quite altered, she became sullen and lazy, stayed constantly in bed, and took no notice of anything. Her habits were indifferent, and at last her parents were obliged to send her back to the infirmary, and she then came on to the asylum. She was always a steady girl, and had no worry as far as her mother knows. She had never menstruated at all.

The *family history* is as follows :

A grandfather and two uncles died of " consumption."

The father, who is alternately coster and gas-worker, is said to take too much alcohol at times, but I could get no real history of alcoholism. His wife, whom I saw alone, assured me that, although she had seen him the worse for drink on rare occasions " when out for a spree," as a rule he was quite steady and had never been " gay " in any way. Moreover, the home is tidy and comfortable, and he himself a spare, athletic, healthy-looking man, who is " never ill."

The mother, a charwoman, looks robust, and says she has never had a day's illness that she can remember except her confinements, and that they were always easy and natural, with no trouble afterwards.

No history of syphilis in either parent was got, nor any of nervous trouble. The mother had ten pregnancies, all full-term, and no miscarriages. But—first pregnancy, the baby died in a week or so of birth, cause unknown ; second pregnancy, the baby died within six weeks of birth, cause also unknown ; third pregnancy was the patient ; fourth pregnancy, a girl now

twenty-one, in service, and healthy. The other six are all alive and well. The mother states that their teeth are good as far as she knows, that none of them have suffered from any nervous trouble, but only ordinary childish ailments. There are in all nine girls and one boy.

History of Case.—During the first five months there was no special note. She became somewhat worse, suffered from frequent headaches, and her habits were bad, the bladder acting often, and the rectum occasionally, without her being apparently conscious of the fact.

In June, the sixth month of her stay, she had her first seizure since admission, and in the early part of July two more. They were slight, more like "sensations," as the nurses say, but were succeeded by a stuporose condition, and the patient had to lie down for a long time after them. There was little or no spasmodic movement. Her habits during June and July, when she had these attacks, were very considerably improved as regards the bladder and the rectum, compared with the preceding period of freedom from these seizures. Her mental condition during this time remained much as above described, possibly more dull and vacant. She stood almost invariably at one spot on being left by the nurse.

On July 27th patient had a severe seizure. She was quite comatose, with flushed face, dilated pupils, which were equal and insensitive to light. The pulse was 120, full and bounding, and the temp. 104·2°. There was some twitching of the muscles on the left side, both limbs and face, and apparent paralysis of the right side, with some general rigidity. Knee-jerks were exaggerated. There was also retention of urine, and the catheter had to be used. The bowels were constipated, and an enema given.

28th.—Next day the temperature rose to 104·8°; there was still retention of urine and constipation. Calomel given.

29th.—Patient began to menstruate for the first time, but scantily. Her temperature began to come down, the pulse was 88, respirations 24, the paralysis less complete, and the coma was going off. There were red marks from vaso-motor dilatation on all points of pressure; nothing abnormal found in the chest. Bowels moved five times.

31st.—She can draw up the right foot, but does not move the right hand or arm. She is more conscious. Temp. 100·6°.

August 1st.—Better. Pulse 96, resp. 18, temp. 99·8°. Has stopped menstruating.

2nd.—Consciousness is returning, and for the first time the pupils are reported unequal, the right being larger than the left.

4th.—Patient is not so well, groaning slightly, duller again. Breathing is shallow and hurried, with well-marked friction sounds at the base of the left lung.

From this date she became steadily worse. Right lung affected at base. Temperature higher. Difficulty in swallowing. Became unconscious again, and died on August 10th.

Post-mortem Examination.—General paralysis evident.

Skull thick and dense, and dura mater very firmly adherent over the whole surface. Dura mater much thickened. Superior longitudinal sinus dilated. Pia arachnoid much thickened and adherent to the convolutions, especially over the frontal region. When stripped off it leaves the appearance of a worm-eaten surface. Cerebro-spinal fluid is opaque, and in great excess. Cerebrum badly developed and small. Grey matter fair in amount, gelatinous in appearance. White matter much congested. Lateral ventricles dilated, and floor granular in places. Basal ganglia normal. Cerebellum normal. Fourth ventricle very granular all over.

Spinal cord much congested.

Heart small, with pale muscle and ante-mortem clot in the right side. Valves normal.

Lungs not adherent to the chest wall, but in the lower lobes of both at the posterior extremity there was an infarct, that on the left side being the larger and measuring 2½ inches at its base, that on the right 1 inch. The rest of the lungs was congested. The liver, spleen, and kidneys were normal.

I direct your attention to the following points of interest :

1. The age of the patient. She began to show signs of the illness at about fourteen or soon after. Although there has been a certain number recorded as beginning at or near puberty, these are still uncommon compared with the immense number of adult cases. I have looked through the case-books at the Claybury Asylum, and find that there have been three female deaths due to general paralysis, in whom nervous symptoms began about the time of puberty, and a fourth who died at the age of twenty, the history being very short.

2. The causation is very obscure. Phthisis in the family

history possibly predisposes to mental trouble. The only other possibility is congenital syphilis, which, in absence of definite history, is suggested by the fact of the first and second of the family dying very soon after birth, the second living just a little longer than the first ; no recurrence of similar incidents throughout a large family, and also that the patient's teeth had imperfect enamel, though this again may be explained by the teething powders which she had, and which may have been mercurial. There is no traumatic or nervous history, no worry or real overwork.

3. The relation between the incontinence of urine and fæces and the seizures, her habits in this respect improving during the months she had the attacks.

4. The apparently intimate connection between pubescence and illness.

The symptoms of general paralysis supervened at the most usual time for the appearance of menstruation, which in her case was then absent. The first signs of the catamenia were ushered in by a severe convulsive attack, which was thereafter relieved and partially recovered from as soon as the period began, although she died a few days later. Out of five cases of juvenile general paralysis in females recorded by Dr. Wiglesworth and Dr. Clouston, four of them never menstruated at all, and the fifth either not at all or scantily. In only four of a total number of twenty-nine girls suffering from this malady was it recorded as having occurred, and then only before, not during the course of the disease.

Metabolism at puberty is certainly profoundly affected by ovarian activity, which, with the prospect of pregnancy, results in a habit of producing material not required for celibate life, and probably even deleterious. This may be excreted normally as the catamenia. Under the conditions of pregnancy this material is retained or, one might say perhaps more truly, excreted in another way, being required for the growth and development of the fœtus.

If one may put it thus, the ovary has several functions—to produce ovules, to modify metabolism, to excrete what is not required, directly or indirectly.

These last two functions are probably carried out by reflex nervous action, and possibly also by an internal secretion, for ovarian substance is said to be a powerful drug (causing rise of

temperature), acting in chlorosis as an emmenagogue and increasing the hæmoglobin and red corpuscles in the blood, and the theory advanced for its use is that chlorosis is a neurosis acting through changes in the internal secretion of the ovary. I suggest that it is possible in the case of this patient that the constitutional taints modified the ovarian secretion so that a toxæmia occurred, either owing to the altered secretion itself or some by-product of the altered nutrition which should have been excreted in the usual way. In the fact that to the end the general nutrition was fairly good this patient differed from most of the recorded cases, in which emaciation was very marked.

Discussion

At the General Meeting, London, 13th October, 1898.

Dr. Robert Jones.—I should like to know whether in the opinion of the members of the Society we should look upon general paralysis as an entity, as a type of disease. Is it a type of general disease? We know that there are two things that go with it, the paresis and dementia, but it seems to me to vary much. These juvenile cases are not very much like ordinary general paralytics. In ordinary cases we find the exaltation and paresis; but in these cases, as Dr. Boyle has suggested, although the children are bright at school they seem to become very dull and depressed. I myself was a little time ago very sceptical as to the syphilitic origin of general paralysis; but I must say I am becoming very gradually, and none the less very thoroughly, converted to the theory that syphilis and general paralysis go very much together. I have seen at Claybury several cases of juvenile general paralysis, but this is the most interesting we have had recorded. At puberty there is general stress upon the organism, an organism perhaps tried by constitutional decay owing to inherited syphilis, and also by the actual poison that must be circulating in that person's body. And if we look upon the pathology of general paralysis, it seems to limit itself more or less—much more than less—to the association fibres of the neuron. When do these fibres appear? They receive an undue stress about the period of puberty or adult age; but it is extraordinary that we find so very few cases of general paralysis in young people, and in those we do meet with there is, as a rule, some sort of inherited syphilis. With regard to the pupils, I should like to know whether there is any one definite symptom of general paralysis in them. I think, from a fair experience, that the speech seems to be the most pathognomonic; others would say perhaps fixation of pupil, as in locomotor ataxia. In Dr. Boyle's case it was this paralytic mydriasis that was the more marked, not fixity of accommodation. The vaso-motor dilatations are also interesting. If general paralysis is not an entity, is it a genus with a number of species? Does it include saturnine, syphilitic, and alcoholic general paralysis? In some cases of general paralysis, with the ordinary signs of the disease, there is found nothing but syphilitic arteritis. I think the earliest age at which syphilitic endarteritis was found was described by Dr. Barlow, and that was a few weeks after birth. As to the metabolism at puberty, what Dr. Boyle has told us is very interesting; but the influence of the ovary is a speculative matter I am not capable of discussing.

Dr. Mickle.—I had the disadvantage of not hearing the first part of the paper; but speaking on the general subject of general paralysis in young persons, in this case it appears to have been one of the kind sometimes called juvenile or pubescent general paralysis. The chief interest in these cases is partly etiological and partly clinical. The strongest etiological relationship appears to be syphilitic. A traumatic element has been reported in some cases. But regarding the clinical aspect of the majority of the cases, one finds certain departures from the general

paralysis as usually observed in adults, especially as regards one point, viz. the incidence in the two sexes. In adult general paralysis the frequency is several times greater in the male than in the female. On the other hand, in juvenile cases the relative frequency is about equally divided between male and female. The average duration of the disease is longer among young persons than among adults. Then the exalted delusions so often found in adults are comparatively rare and slight in the young. As regards the physical symptoms of the disease, I do not see how on the whole there can be very much difference between the young and the adult. There are certain seizures to which general paralytics are subject, which are quite as frequent, if not more, in the young than in the adult. I have especially noticed in a few cases of general paralysis occurring in early youth the tremor about the muscles of the face. One great authority on the subject holds that to be a strong indication of alcohol having a large, perhaps the chief, share in the etiology. I have, however, seen a number of cases which completely oppose that view. And I remember two young paralytics showing a large amount of tremor, with no evidence whatever of their having had any alcohol. With regard to the cerebral post-mortem appearances, there is practically no difference between juveniles and adults when the length of the disease is considered. There are a number of cases of juvenile general paralysis recorded and unmistakeably described by observers who have long ago gone to their rest. I do not think that there is any age when individuals are free from the disease. I believe in an infantile general paralysis, and see no reason why a child should not be a general paralytic at its birth. It is difficult to prove that; but if we examine the history of the recognition of general paralysis one has very fair grounds for believing that to be probably true. I think that among those who have been described as dying in early life from congenital syphilis with lesions of brain and cord, many were general paralytics.

Dr. MERCIER.—I rise not to traverse the whole field of etiology, symptomatology, pathology, and treatment of general paralysis, which might occupy us to an inconvenient hour, but to welcome the first paper before this Association by a lady member, and to express my high appreciation of that paper. I noted that this patient improved very much after a convulsion. Now I think it is a common experience that general paralytics do always improve temporarily after convulsions. If a patient is having convulsions at stated intervals, after any convulsion his condition will be decidedly better than it was immediately before the convulsion, but not so good as immediately after the previous one, and so he will go on deteriorating, but not steadily. He will pursue a course which may be compared to a switch-back. Every fall will be deeper than the previous, and every rise will be less high, until he arrives at his destination.

Dr. BOYLE.—In reply to Dr. Jones, and as I ventured to suggest the occurrence of toxæmia, it has been said that the differences in the course of general paralysis in various cases are due to the differences in the toxins producing the disease.

The Effects of an Injury to the Head in an Alcoholic Subject.

By NATHAN RAW, M.D., Medical Superintendent, Mill Road Infirmary, Liverpool.

THE following remarkable case exemplifies in a marked manner the varying symptoms which may be produced in a subject of chronic alcoholism, and especially when some severe injury to the head has occurred to mask and complicate them.

H. P—, æt. 38, a window cleaner, was admitted into this Infirmary on 13th December, 1897, with a strongly alcoholic history. Two days ago he was working on a ladder, whence

he fell a distance of eight feet, alighting on his head. He was found by the police, who thought him drunk (which he probably was) and removed him to the lock-up, where he spent the night. He remained there twenty-four hours, when he was bailed out, and after removal home he was found to be semi-conscious and dazed. During the night, for the first time in his life, he had fourteen fits of an epileptic nature.

On admission here the next day he was carefully examined, more especially with regard to the cranial injury. He has an intelligent appearance, head almost bald, is very slow in perception, and only answers questions after considerable hesitation. Ideation imperfect. He gives in his own way a rational account of himself, and persists in the statement that he was quite sober when he fell, but remembers nothing afterwards until he was taken home.

On examination there was a large general bruise and hæmatoma over the right side of his head, exactly corresponding to the motor area in situation. No wound, and no traces of hæmorrhage nor other sign of fracture of skull. His muscular sense was good ; no paresis of opposite side or facial paralysis. Reflexes normal, optic discs normal, and pupils normal. He was diagnosed as a case of probable concussion of the brain, and kept in bed on milk diet. He progressed well for two days, and I thought that he was improving, when without any prodromal symptoms he developed fits and had thirty-nine in rapid succession during the night. The fits were epileptic in character, chiefly confined to the left side, and invariably commenced in the left thumb and hand, rapidly spreading to arm and face and then to left leg, afterwards becoming general all over the body. In fact, to briefly describe the convulsions I would say they corresponded to an irritative lesion of the right motor area (cortical). Two hours after the fits ceased he was quite conscious, but it was noticed that he had complete left hemiplegia. The left arm and leg were completely paralysed, with marked lowering of temperature ; the facial paralysis was only partial, involving only the lower portion of the nerve. The orbicularis oculi and the frontal muscles were not involved. The tongue deviated to the paralysed side. The optic discs were quite normal. A special nurse was appointed to watch and note his symptoms, and in two hours she called the medical official, informing him that the paralysis had passed off as

rapidly as it came. I saw the patient at once, and assured myself that he had no sign of paralysis, his muscular power being the same on both sides. He was quite conscious.

December 16th.—To-day he has had several minor fits, in each case losing consciousness for a few moments.

17th.—To-day he has had nineteen severe fits, each one lasting five minutes and being quite distinct and epileptiform in character. He has again after the fits complete left hemiplegia.

The question of operation now naturally arose, and as the man was becoming exhausted it was thought desirable to do something.

All his symptoms pointed to an irritative lesion of the cortex on the right side, corresponding to the bruise, but the important fact that his paralysis was transient, and had completely passed away, led me to believe that there might be some cortical laceration with hæmorrhage—that there was no lesion which could be removed by operation.

18th.—Next day he had again fourteen fits of a very severe type, and immediately afterwards he again developed complete hemiplegia, which passed away in four hours.

20th.—He remained well for twenty-four hours, when he was again suddenly attacked with a most violent epileptic seizure and complete unconsciousness for ten minutes. After this fit his hand and leg were weak, but not completely paralysed; no hemianæsthesia. His mental condition was confused; he was continually asking for his clothes and whisky.

22nd.—To-day he had two more powerful fits, leaving him confused, very irritable, and difficult to deal with and to keep in bed; no paralysis, but slight paresis.

23rd.—Again had a severe fit, in fact the worst and longest since admission. Immediately after this fit had ceased he developed complete left hemiplegia, which lasted for two hours, and then passed off as rapidly as it came.

24th.—Is much better, eats and sleeps well, not so confused or irritable, can converse fairly rationally, but his perception is still slow; memory deficient. From this time he improved rapidly. His mental symptoms cleared up, and he was allowed up.

He was most anxious to get home, evidently to be in time for the Christmas festivities, and he went home perfectly well, with no dragging of the leg and no impairment of muscular

sense. His memory was deficient to the extent that he remembered nothing of the first two days of his illness.

A week later he was brought back to the insane department in a state of mania. His friends said he had been drinking heavily all the time, and had developed delirium tremens the previous night.

He had the usual features of alcoholic insanity, with maniacal symptoms—a dangerous aggressiveness, with sudden and brutal violence.

He had also optimistic delusions, which were, however, only of a transient nature.

He soon calmed down ; large doses of paraldehyde (in my opinion the best sedative and hypnotic for alcoholics) had a good effect, and the acute symptoms rapidly passed away. He had no signs of hemiplegia, both sides being equally powerful.

He remained here two weeks, then was induced to sign the pledge, and for nearly a year has remained well and steadily at work.

Remarks.—The interesting features of this case are those which assist in elucidating the pathology of epilepsy. This man had the most violent fits, in fact on some occasions verging on the "status epilepticus." Following these attacks he had complete motor paralysis of one side, which came on *immediately* after the fits, and passed off as suddenly some three or four hours after. Many and varied have been the theories of epilepsy advanced, but I think the most reasonable theory of idiopathic epilepsy is that it is always cortical in nature, from the fact that tonic spasm followed by clonic spasm can be produced experimentally only by stimulating the cortex cerebri.

The character of the movements is also that obtained by electrical stimulation of the motor cortex.

The cells of the cortex may be regarded as pent-up reservoirs of energy, and in a healthy person the cells are able to keep their energy under control, but this control is broken down by a blow on the head or by the incitation of a depressed fracture. The next most interesting point is the paralysis following the fits. This I explain by the fact that the sudden discharge of nervous energy from the cortex, causing convulsions, produced a temporary exhaustion of the cells, and consequently motor paralysis. So soon as this exhaustion was overcome and the

cells were again charged with energy, the paralysis passed off. The diagnosis made at the time, viz. that of concussion of the brain with some cortical laceration, seems to me to correspond best with the symptoms, and I am glad that I did not operate, as the patient has made a complete recovery without such grave interference.

Pathological Notes on Cases of Heart Disease at the Durham County Asylum. By T. Aldous Clinch, M.D., Pathologist.

A. *Five Cases of Mitral Disease.*—(1) Stenosis and incompetency; death due to sudden complete obstruction of the mitral orifice. (2) Stenosis; no tubercle of lung. (3) Stenosis; atrophy of heart; advanced tubercle of lung. (4) Stenosis; right-sided dilatation; tubercle of lung. (5) Stenosis (? also insufficiency); calcification of musculi papillares; early tubercle of lungs.

B. *Three Cases of Cardiac Degeneration.*—(1) A. No. 5. (2) Rigidity and calcification of the fibrous ring surrounding the mitral orifice; tubercle of lungs. (3) Rigidity and calcification (? ossification) of the same structure; muscular degeneration.

C. *One Case of Congenital Deformity.*—(1) Two cusps to the pulmonary valve.

A. *Five Cases of Mitral Disease.*

1. M. M—, admitted 19th May, 1894, æt. 60, female. Soon after admission evidence of cardiac disease was found; at first mitral insufficiency, but later loud murmurs, both systolic and diastolic, developed. The case clinically showed no special features, and appeared to be doing satisfactorily under suitable treatment. One night, however, she rose from bed, and before the nurse was able to reach her dropped down insensible. When medical assistance arrived she was found to be dead.

The necropsy showed slight brain degeneration; a little blood in pericardium; a fatty epicardium and diseased coronary arteries; dilatation of the right side of the heart; hypertrophy of the left side; stenosis of mitral valve; *retroversion of the anterior flap, to which was adherent a mass of vegetation, and this was drawn back into the auricle and now laid across the stenosed orifice in such a manner as to completely block it;* lungs slightly

œdematous and passively congested; liver passively congested; spleen large and swollen; *kidneys with commencing interstitial nephritis.*

2. G. H—, admitted 17th July, 1894, æt. 64, male. Pulse was then rapid (104), feeble, heart dilated, cardiac sounds feeble; no murmur audible. General condition was very weak, and till his death the greater part of his time was spent in bed. Rather more than four years after his admission he was seized with an acute attack of cardiac dyspnœa, and when seen medically showed all the signs of extreme heart failure; in spite of appropriate treatment he sank rapidly and died in about two hours from onset of attack.

Necropsy showed chronic disease of brain; tortuosity and varicosity of choroid veins; considerable arterial degeneration; normal costal cartilages; much thickened and somewhat adherent pericardium; fatty epicardium; diseased coronary arteries; *mitral stenosis;* thickened but competent aortic valves; œdematous lungs; congested liver; spleen small; *kidneys with early cirrhosis.*

3. Admitted January 28th, 1897, æt. 48, male. No specific cardiac disease was noted clinically, but the heart's action is reported to have been very feeble and the circulation defective. Phthisis commenced soon after admission, and the patient died about a year later.

Necropsy showed chronic disease of brain; calcification of costal cartilages; normal pericardium; small and atrophied heart (6½ ounces); *great stenosis of mitral valve;* other valves normal; huge cavities in apices of both lungs; numerous small cysts in liver, containing bile-stained mucoid material; large and soft spleen; *degenerated kidneys;* tubercular ulceration of intestine and of skin.

4. S. F—, chronic dement, æt. 74, female. In April phthisis was observed, followed in May by cardiac dilatation; her health rapidly gave way, and in the middle of June there was commencing œdema generally, œdema of lungs and hydrothorax. She gradually sank and died at the end of the month.

The necropsy showed chronic brain disease; costal cartilages normal; a little fluid in pericardium; right-sided dilatation of heart; tricuspid incompetence; *thickening and stenosis of mitral valve,* which only admits the little finger; aortic valves normal;

muscular substance of good appearance and consistence ; hydrothorax on both sides. Left lung : emphysema, tubercle (recent), congestion, œdema, and collapse. Right lung : old fibroid phthisis ; large area of recent tubercle. Liver slightly cirrhotic ; gall-bladder contains thin bile and several calculi of various sizes ; spleen large and soft ; *kidneys small, granular, contracted.*

5. M. C—, admitted 22nd November, 1895, æt. 82, female. She was very feeble ; severely affected with rheumatoid arthritis ; very feeble cardiac action ; cardiac dilatation ; no murmurs ; pulse 78 ; emphysema and chronic bronchitis. Patient vegetated for two years more, gradually dying from asthenia.

The necropsy showed petechiæ on limbs ; dorsal kyphosis ; sclerosis of uncinate gyri ; basal vessels much atherosed ; chronic brain disease (including cerebellum) ; costal cartilages normal ; pericardium normal ; heart atrophied but covered with much fat ; tricuspid valve thickened ; pulmonary valve normal ; *mitral valve stenosed, c.d. 2 cm., musculi papillares calcified at tips ;* chordæ tendineæ thick and rigid ; aortic valves thickened, rigid, and slightly incompetent ; aorta and roots of large vessels show calcareous atheroma ; early tubercle of upper lobe of right lung ; remainder of lung is œdematous and congested ; biliary calculi ; venous congestion of liver ; *small, cystic, granular contracted kidneys.*

It is generally taught that mitral stenosis is a disease especially affecting young women, but in this series of cases if we take those which have tolerably pure stenosis we find that two cases are male and one female, and all of them past middle life ; by including the cases in which insufficiency of the valve was also present we alter the proportion of sexes but not the age, having now three cases in females and two in males ; all these patients, excepting one and that a male, have passed the climacteric. It may be argued, and we think fairly, that in an asylum an undue proportion of patients are comprised of people who have broken down at the commencement of old age, and hence our proportion of old patients is excessive. There is undoubtedly truth in this, but if these cases really commenced in early life then the mitral stenosis of that period must be a much less rapidly fatal disease than is usually supposed, for our patients do not belong to a class living under conditions favourable to the treatment of cardiac affections. Dr.

Sansom ([1]) quotes various authorities showing that forty is above the average age for these patients to live.

But there are other points which lead us to conclude that these cases belong to a different type of the disease. It will be observed that all these cases were subject to interstitial nephritis varying in degree. This observation was not made till the cases had been collected together and classified, and it is therefore all the more impressive. Dr. Sansom, ([1]) following Goodhart (1880) and Pitt (1887), refers at length to a class the existence of which as a morbid entity appears to be doubted, although it includes the cases now described. In these cases we find throughout the body more or less evidence of arterio-fibrosis. The heart lesion is merely a local manifestation of the general disease.

Tuberculosis has been shown to occur very frequently in mitral stenosis, and some have gone so far as to attribute the cardiac disease to the tuberculosis ; but though the tubercle bacillus has been found in cases with vegetation, and tuberculous endocarditis has been experimentally produced, ([2]) the bacillus has never been found without them. In our cases tuberculosis was present in three out of five cases, and was generally of so recent a character that it could hardly have been the cause of the endocarditis. That the interference with the pulmonary circulation, producing venous stasis and waterlogging of the tissues, will predispose to the attack of the bacillus is certain, and we therefore believe that the relation between the two is that the lung disease is secondary to that of the heart.

B. *Three Cases of Cardiac Degeneration.*

1. The same case as is reported fifth in Series A.

2. M. H—, admitted 8th May, 1897, æt. 64, female.

On admission there was no evidence of cardiac disease ; about nine months later he fell and fractured his thigh ; lobar pneumonia set in, and patient died.

The necropsy showed ununited fracture of thigh ; basal vessels of brain much diseased ; chronic brain disease ; costal cartilages not ossified ; pericardium toughened ; epicardium fatty ; *right side of heart dilated ; left side hypertrophied ; rigidity and calcareous degeneration of fibrous ring surrounding mitral orifice ; bases of aortic cusps calcareous*, valve competent ;

pneumonia of lower lobe of left lung, probably infected with tubercle in patches; old cured phthisis in right apex. Liver cirrhotic, kidneys normal to naked eye.

3. Of this case we have the necropsy notes only. A. L—, æt. 80, female.

Brain shows chronic disease; chronic vascular disease in ganglia; much atheroma of all large vessels. Chest contracted and approaching the type seen in osteomalacia; costal cartilages slightly calcareous; pericardium normal, sac full of slightly turbid fluid; epicardium exceedingly fatty. Coronary arteries tortuous and atheromatous. Myocardium very soft and dark in colour. Tricuspid valve slightly fibrotic; pulmonary valve normal; mitral valves somewhat thickened and rigid; *the fibrous band surrounding the mitral orifice is thickened to the size of a cedar pencil, and is of the consistence and appearance of cancellous bone.* The lungs show senile atrophy. Liver is fatty. Kidneys are very congested and slightly atrophied.

Of these cases only the last two need special comment; it would appear that the degeneration described is exceedingly rare; it is not mentioned in Zeigler's *Pathology* or in Clifford Allbutt's *System of Medicine.* One might assume that it would lead to increased accentuation of the first sound in the aortic area, and in cases of mitral incompetence associated with it would conduct the murmur to the aortic area in rather a puzzling and misleading manner.

c. *One Case of Congenital Deformity.*

1. Two cusps to the pulmonary valve.

Patient was an epileptic; he showed no symptoms during life.

It would appear from researches of Dr. Simpson ([3]) that while two cusps to the aortic valve and four cusps to the pulmonary are comparatively common, two cusps to the pulmonary is much rarer, especially so perfect a specimen as the present one. In this case there is a slight indication of a division in the anterior one.

I must express my thanks to Drs. Skeen, Geddes, and Jones for permission to make use of their clinical notes.

([1]) A. E. Sansom, Clifford Allbutt's 'System of Medicine.'—([2]) Michaelis und Blume, 'Deuts. medicin. Wochen.,' September 1st, 1898.—([3]) Simpson, 'Journal of Anatomy and Physiology,' July, 1898.

Occasional Notes.

The Lord Chancellor's Lunacy Bill.

THE Lord Chancellor's Lunacy Bill has now been introduced into Parliament in two successive sessions, and on each occasion has duly perished with the innocents. The time must therefore, if we may rely on previous analogies, be drawing near when the measure may be expected to take its place on the statute book. Under these circumstances a brief critical summary of its main provisions may not be inopportune. The first point of importance is the curtailment of the duration of an urgency order from seven days to four, coupled with the requisition of what is practically a new "statement of particulars," to be signed by the person signing the urgency order, and by the medical practitioner granting the accompanying certificate. We know the kind of case at which this provision is aimed. It is doubtful, however, whether such cases are sufficiently common to justify an enactment which will make the already difficult task of securing the curative treatment of insanity in its early stages more difficult still, by at once rendering the urgency order procedure cumbrous, and increasing the reluctance of medical men to certify. Other provisions in the Bill have a contrary effect. Such are those enabling a justice *virtute officii* to be appointed a special justice under Section 10 of the Act of 1890, prohibiting fees in respect of proceedings for a reception order before a judicial authority, and authorising the detention of a lunatic in a workhouse for not more than three days, even if the inquiries under Section 27 of the Act of 1890 cannot be completed before the order is made. It may be added that to the persons disqualified for signing certificates under Section 32 (1890) the Bill annexes two new ones, viz. the person making the reception order and employés of managing committees or licensees. Direct provision is made for pensions to officers and servants of asylums, and for the allowance of gratuities in cases of injury specifically attributable to the nature of the duty of the injured person

incurred by him without his own default in the actual discharge of that duty. Lastly follow a variety of strictly legal and judicial provisions. Section 322 of the Act of 1890, dealing with offences against patients, is to include "striking," and to extend to workhouses, impliedly excluded hitherto by the definition of "institution for lunatics" in Section 341. The Master in Lunacy, subject to the rules, and to the annulment or variation of his orders on appeal, is to have the jurisdiction of the Judge in Lunacy—a provision which practically will make the Lords Justices appellate judges only.

"Arrest of mental development" is added to the grounds of jurisdiction under Section 116. It was doubtful whether this common condition came within the words "infirmity of mind arising from disease" in that section. By Section 116 patients are brought within the range of duty of the Chancery Visitors. And the effect of inquisitions upon reception orders is at last defined. Briefly the result is this. If the alleged lunatic is found sane the reception order determines forthwith. There is room here for greater precision, and for directions as to notice to the person having the lawful control of the lunatic. If the finding is one of incapacity to manage himself and his affairs, the reception order continues in force till a committee of the lunatic person has been appointed. If the finding is incapacity to manage affairs only, the order determines, but the judge may give directions as to residence, care, treatment, &c., so long as a reception order stands, but no longer. The duty of the Commissioners in Lunacy to visit the patient subsists. What the effect of proceedings under Section 116 on reception orders is to be is a point that might with advantage be cleared up.

Criminal Evidence Act.

The Criminal Evidence Act, 1898, has now come fairly into operation, and it is already possible to forecast its working in certain directions. In the first place the Act will certainly facilitate the proceedings of our police courts by enabling the magistrates to dispose of cases in which, but for the evidence of the prisoner, they would have had to order a remand for inquiries. Again—and this is rather a serious matter—it looks as

if the fear that silence would be interpreted prejudicially to them by the jury will exercise a practical compulsion on prisoners to give evidence in a vast majority of cases. This consideration makes it all the more important that no undue advantage should be taken of prisoners in cross-examination, or in the summing up of prosecuting counsel. So far there has been nothing to complain of in either respect. Lastly, there can be no question that the Act will secure the conviction of many prisoners when they might not have been found guilty but for their own evidence. The recent case of Dr. Whitmarsh is an illustration of this fact; the case against him, though strong, rested largely in itself on evidence which was circumstantial and not direct, and had matters been left there the second jury which tried him might have disagreed as the first did. But the prisoner clinched the case for the prosecution by denying incidental statements of fact of which there was abundant proof, and above all by fixing the date when Alice Bayley last called upon him. Whether this quality in the new Act with which we are dealing is a merit or a defect is a point on which opinions may differ; but it shows the need for a very cautious administration of the measure if the conviction of the innocent is to be avoided.

Various other issues have been raised under the new Act. We may pass by the question, no longer of any practical interest, as to the date when it came into operation. But the Court for Crown Cases Reserved has already decided (*Queen* v. *Rhodes*) with unimpeachable propriety that a prisoner has no right to be called before the grand jury, and that the statute does not interfere with a summing up by prosecuting counsel under Denman's Act. In the same case it was held that the fact that a prisoner declines to give evidence may, at his discretion, be made the subject of comment by the presiding judge. It is difficult to say that this ruling is not legally sound. But it practically will make prisoners compellable as well as competent witnesses. A serious division of opinion has been produced by the question whether a prisoner can be prosecuted for perjury in evidence which he gives in his own behalf. Mr. Justice Wills, on circuit, took the negative view. Mr. Justice Ridley has adopted the affirmative, and has actually ordered a prosecution, besides commenting on the evidence of prisoners in terms which have been severely criticised by the legal pro-

fession. The solution of this difficulty will be awaited with great interest.

The Case of Dr. J. A. Campbell.

Our action might be misjudged if we were to leave unnoticed the trial (reported in our medico-legal column) of Dr. J. A. Campbell, of the Garlands Asylum, Carlisle, for an offence under Section 324 of the Lunacy Act, 1890–91. We need not say that we refer to the event with the deepest pain.

The law has rightly provided special penalties for such an offence, an offence against the most helpless of creatures—a human being deprived of the great human attribute of reason, and left defenceless to the power of others or to the promptings of brute passion; an offence, too, against all principles of fiduciary honour; an offence, in fine, so revolting that it almost falls under the category of unnatural crime. The common sense of mankind calls loudly for the exemplary punishment of such offences; and our specialty, which has always been the great protector of the insane, strongly upholds enactments framed by the law in accordance with the spirit of natural justice.

The case before us has other points of interest for us besides the directly humanitarian. It interests us further, inasmuch as insanity was pled in exculpation of the prisoner. This plea did not surprise anyone who had either known Dr. Campbell recently, or had heard in detail the circumstances of the act charged against him.

The trial proceeded on the familiar lines. The prosecution adopted the view that mere alcoholic intoxication at the moment when the crime was committed accounted for the prisoner's conduct. The judge, having pointed out that mere drunkenness at the moment was no defence, proceeded to lay down in a quite unmodified way the law as pronounced in the McNaghten case. It was put to the jury: was the accused through insanity incapable of knowing what he was doing? or if he did know what he was doing, was he incapable through insanity of knowing the nature and quality of the act? It is doubtful what effect this had upon the jury. It must have been perfectly evident, even without entering upon Sir James Stephen's subtleties, which Mr. Justice Phillimore very cavalierly swept

aside, that the accused did not know the nature and quality of the act which he was committing ; so that the real question remained—to what was this ignorance due ? Indeed, the introduction of these considerations was probably favourable to the accused by drawing the minds of the jury from the direct issue, "was he insane or not ?"

The evidence of insanity, the exciting cause of which being in all probability recent alcoholic excesses, was enormously strong, so strong as to be irresistible ; for there was in addition, no doubt as a predisposing cause, a period of thirty-one years in asylum service operating on a certain morbid quality of brain. Medical men and laymen, some of whom had known him for years, and some of whom were strangers to him, deposed to having met the prisoner shortly before the date of the offence, and to having formed and expressed at that time the distinct opinion that he was insane. By a curious chance two doctors in general practice in Carlisle, unbiassed and thoroughly respectable witnesses, had seen the prisoner on the day on which the offence was committed little more than an hour before its commission, and were then satisfied that he was not drunk, and that he was insane. Either of them would have been prepared to certify ; and one, so forcibly was he struck by Dr. Campbell's condition, said that if the latter had been a pauper patient he would have communicated with the parish doctor as to Dr. Campbell's state (that is, with a view to restraint).

It is true that two medical men were called by the asylum committee to show that the prisoner was not insane, and that mere drinking accounted for his condition ; but this evidence, besides being in conflict with an enormous body of expert and non-expert opinion, was discounted by the fact that these witnesses for the prosecution had been in the habit of daily seeing the accused, and had evidently failed to appreciate his degenerated condition. Besides, the prosecution endeavoured to prove too much, and brought up some contradictory evidence to the effect that the prisoner was not a man of drinking habits.

No one who followed the details of the trial can feel a doubt as to the verdict, or can fail to see that Justice has done fairly when, weighing in one scale what a lunatic had suffered and in the other what a lunatic had done, she struck the balance by condemning the latter to confinement during Her Majesty's pleasure.

Sad end to a life much of which was spent in excellent service to the insane! pitiable termination to a career not without distinction!

It is unnecessary for us to point one obvious moral which suggests itself from this shocking case. So dreadful are the results we daily see from the drinking habits of our population that one appalling case more will hardly count. "They have Moses and the prophets; if they will not hear them, neither will they be persuaded, though one rose from the dead."

But there is another point to which we feel constrained to refer. Mr. Justice Phillimore in his charge said that "he must draw the attention of the jury to the strange condition of things in the asylum.

Some witnesses, superintendents of other asylums, had given evidence that Dr. Campbell showed signs of insanity months and even years ago, and yet he was allowed to go on in his position superintending the asylum. The situation became almost grotesque when they found that Dr. Campbell at the time gave evidence at the Assizes in a case where a man was charged with murder."

It most impressed the judge that the prisoner should have been lately in the position to give evidence in the case of another lunatic. To us who are interested also in those of the insane who do not come into court, it seems doubly sad and wrong that, whether the pleading of the prosecution (the asylum committee) or of the defence (the asylum superintendent) may have been correct, the state of things revealed in this trial should ever have been allowed to come about.

Luccheni: the Murderer of the Empress of Austria.

It is one of the most difficult problems of jurisprudence to devise some method of repression for crimes of the class that is called "political." These crimes are rarely the direct result of need, and are seldom committed by members of that order of beings who live parasitically upon society and constitute what is known to the police as the criminal class.

The "political" murderer, the assassin of emperors and presidents, the dynamitard, the Invincible who makes history

by letting out his fellow-subject's bowels with an amputating knife, has commonly but one human motive which can be appealed to, namely, vanity. The horror of the world, the public trial, the vast commotion in the press, the abuse and execration heaped upon the prisoner who is safe behind the bars, are a sincere delight to him. Nay, in countries where executions are still public, there can be no doubt that a last appearance on the scaffold and a last display of bravado which will be telegraphed all over the globe have a positive charm for minds of this type.

Hence it is perhaps salutary when these wretches can be made to feel that they are merely the morbid products of a particular age, no more heroic than the beggars who at another period of the history of civilisation crouched at Dives' gate.

The disgusting Luccheni, whose murder at Geneva of the kindly if eccentric lady who shared the uneasy honours of the Hapsburg crown threw all Europe into mourning, was a specimen of this class, and has formed the subject of a special study by Professor Lombroso from the criminal anthropologist's point of view.(1) Lombroso's studies of the criminal generally and of the anarchist in particular are too well known to our readers to need description, and in the present case he follows his usual methods. Luccheni, he tells us, is the illegitimate son of a domestic servant by her master, who is a drunkard. Both parents, who are still alive, were originally from Parma. The mother is now in America. Luccheni was born in Paris, where his mother put him into a foundling hospital, whence he was sent back to his parental country, and placed in a similar institution in Parma ; mere hotbeds and nurseries of crime, all of them, seems to be Lombroso's verdict on these places. From here he was boarded with two families : of the first, the father was given to drink ; the mother led a very immoral life. The second family seem to have made a livelihood chiefly by begging. Later on he was sent to school, and from thence he became a servant for a couple of years. Then he served his term as a soldier, having in the meanwhile spent a short time in Switzerland, where he probably became an anarchist.

Returning to Switzerland after his service as a soldier, he became suspected by his associate anarchists, and determined to commit a crime against a sovereign, so as to show his devotion to the cause.

At about thirteen years old Luccheni had an epileptic attack. Lombroso describes him as having drooping lids, very prominent superciliary ridges, strongly marked zygomata, and heavy lower jaws. Forehead low and receding, facial angle small, and the subject is brachycephalic. Examination of his handwriting shows an alternation of macrography with micrography, and to this much importance is attributed, not only because this state is often present in epileptics, but because it is associated with impulse and with double personality. The latter condition is held to have existed because Luccheni was fond of children, and was a good servant ; he also on one occasion expressed an enthusiasm for military service, and yet was an anarchist, and afterwards an assassin. This double personality is characteristic of the hysterical and epileptic. It would seem to us that inconsistency of character is common enough among all members of the human race. Luccheni's conduct at his trial, and indeed throughout—his utter heartlessness, his blatant and blackguardly boasting, his unmeaning jokes with his lawyer, his efforts to attract the attention of the press,—are all of a piece with his entire character, and in no way fit with that alternation of piety and violence, of high principle and rowdy behaviour, with which we are all so familiar in the unhappy epileptic. Epilepsy explains much according to Lombroso, but not all. If the individual organic cause counts for much, the circumstances of his birth and the environment in which he lived count also for a very great deal. To this we may all subscribe, without being quite able to follow the social and political ideas which Professor Lombroso very bravely, honestly, and earnestly urges upon his countrymen. Something has unhappily made Italy specially fertile in these wretches, but to attribute this in chief part or even largely to the financial condition of the country, and to the consequent distress of the people, seems to us to be merely to seize the nearest and most convenient explanation. Distress no doubt is not so widely spread in England as in Italy, and yet we have plenty of it, quite enough to raise a good crop of anarchy if distress were alone necessary for that.

It is true that Lombroso, with that odd want of perspective in his views of things insular which is so often to be noted among the greatest Continentals, gives us to understand (2) that the English are saved from anarchism by the diverse fanatical sects that exist in this island, and the various benevolent and

other societies. All these things occupy people's minds and give vent to their energies. "In England Caserio would perhaps have found a place in the ranks of the Salvation Army, which would have furnished food for his fanaticism, and for his need of action."

But these arguments appear to us mutually destructive: for on the one hand we venture to doubt the power of the Salvation Army to suppress a bread riot should such a thing again unhappily break out in England; and on the other it would appear that the classes who furnish the anarchists are by no means the most needy, or those who suffer most from distress.

Both as a pioneer in science and as a reformer in social affairs Lombroso appears to have encountered difficulties which it may console him to know are not peculiar to Latin races. His article in *Le Revue des Revues* concludes thus:—"As for the imbecile notion of some Latin nations, who, instead of disinfecting the surroundings, think it better to suppress the physicians when they suggest remedies, and the writers when they labour for the improvement of social conditions, it could not spring up except among classes and peoples unworthy to live in our century."

(1) "Luccheni giudicato dal punto di vista antropologico-psichiatric:" see also "Le Crime de Luccheni," by the same author, in *Revue des Revues*, No. 21, 1898. —(2) See *Gli Anarchisti*.

The Bedborough Case.

We regret that Mr. Havelock Ellis's work on *Sexual Inversion* should have been among the books which Mr. George Bedborough pleaded guilty to having sold, when he was charged with the sale of obscene literature at the Old Bailey on October 31st. Mr. Ellis's well-known reputation as a criminal anthropologist will be a sufficient guarantee of his motives in writing the work in question, but it is certainly most unfortunate that a man who must plead guilty of the sale of an indecent lecture and an indecent journal should have the opportunity of claiming a scientific study as part of his peccant matter.

In dealing with the German original of this work, and with the kindred work of Raffalovich in this Journal a year and a

half ago, we pointed out the danger of such works getting into improper hands, and being used for other purposes than those of scientific research (see vol. xliii, p. 570). It is now evident enough that our fear is justified, and we trust that observers in the field of sexual depravity will bear in mind the lessons of the Bedborough case. The perpetual repetition of the theory of Ulrich, that some people are naturally possessed of a perverse sexual feeling, is tiresome. We are never favoured with an atom of proof, and writers seem to imagine that they advance their arguments by heaping up unsavoury details—details which, however harmless they may seem to us who are accustomed to the vagaries of insane passion, will, if they fall into the hands of the vulgar, be treated as a mere bundle of very dirty stories, and as such are liable to become part of the stock-in-trade of the pornographic bookseller and his wretched *clientèle*. We are sorry for Mr. Ellis, especially as he was unable to defend himself, the charge being only against the vendor of various works ; but we are of opinion that he should have exercised more care with regard to the mode of production and sale of his volume in its English form. If it is found impossible to avoid the introduction of monographs on such subjects into the secret drawer of the dealer in indecent books, then in our opinion the production of these monographs should cease, as they are likely to do more harm to their readers among the general public, and to their authors, than will be compensated by the instruction they give to those who read them with merely scientific desire for information, or who have already had more than enough of detailed cases.

Pathological Laboratories.

The last Report of the Pathologist to the London County Asylums gives evidence of the high quality of the work in progress at the Asylums Laboratory. Without attempting a review of the Report, we may here allude to the chief topics with which it is concerned, and these are—The occurrence of acute fatty degeneration in certain muscles in general paralysis of the insane ; the action of cholin—a product of degeneration of brain tissue, which exists in the cerebro-spinal fluid of

general paralytics, and of other cases of chronic brain disease —in producing a fall in the blood-pressure, with suggestions as to the dependence of certain of the phenomena of general paralysis upon this action; the relationship of syphilis to organic brain disease and general paralysis; the pathology of the primary degeneration of the neuron in certain affections of the cord; the minute changes in the cortex of general paralytics, and studies of the vagus and sympathetic nerves in general paralysis; the estimation of phosphorus and sulphur in brain and spinal cord in healthy and diseased conditions, with an associated histological study of the cortex cerebri in the same cases. Dr. Mott also promises the publication of the first instalment of the 'Archives' of the Laboratory, with a full account of the work which has been accomplished. That the disease—general paralysis—should occupy such an important place in the Report is natural enough, for the brain in paralytic dementia presents to the pathologist tangible realities which, we would assert, are more than the sum-total of the conditions presented by that organ in the other forms of insanity. Tuczek's observation of the degeneration and atrophy of the tangential system of fibres in the cortex of general paralysis has been confirmed by various observers, and now by Dr. Mott. We do not remember to have seen any adequate suggestion in reference to the pathological significance of this degeneration; and, as far as we are aware, there is not any evidence to show that the tangential fibres are affected separately from other medullated fibres of the cortex in diseases of the cortex, though we believe that some are of opinion that in certain morbid conditions they suffer the earliest amongst such fibres. We consider that, in regard to the medullated fibres of the cortex generally, there is considerable scope for prosecuting the work of Kaes in this field in the case of insane brains.

Dr. Mott, we observe, expresses the opinion that the changes in the nerve-cells of the cortex in general paralysis are partly due to primary progressive decay of the cells, partly to changes brought about by stasis in the vessels. The latter, we presume, are changes due to anæmia. We gather that Dr. Mott is of opinion that the formative proliferation of the glia-cells (sclerosis) is secondary to the necrobiotic changes in the neuron. We believe that this view, in contra-distinction to that which regards the vascular and connective-tissue changes as the

earlier, is the more widely held now. The views of Bevan Lewis upon the "scavenger" function of the hypertrophied glia-cell have not, we think, received support from other writers. Doubtless the point is most difficult of proof. We shall await with interest the latest views of Bevan Lewis in the second edition of his work, which we understand is about to appear.

Dr. Mott has devoted much pains to tracing the relationship between syphilis and organic brain disease, and more particularly general paralysis, and he is in accord with the increasing number of authorities who believe that syphilis is the most important factor in the production of general paralysis. To this view we note that Oppenheim subscribes in the second edition of his *Handbook of Diseases of the Nervous System*, published in May last.

The interesting report, to some features of which we have alluded, is available for the perusal of our readers, and we need make no further reference to it.

In this connection we would refer to "Memorandum No. 3," just issued from the Laboratory of the Scottish Asylums, which sufficiently indicates the good work in progress there. *Inter alia*, the "Memorandum" draws attention to the list of asylum demonstration-sets now available at the laboratory—preparations and slides for the purpose of study. This would appear to be one of those things which they do better in Scotland. It may be that at the Laboratory of the London County Asylums such demonstration-sets are in course of preparation, and that the medical officers of the metropolitan asylums enjoy the same privileges as their Scottish colleagues. As regards English county asylums generally, even when there is a pathological laboratory we fear that much time is lost, and that many mistakes are apt to be made, by men who have to start pathological work without experience, often without guidance, and without the corrective influence of a standard demonstration-set of sections.

The Innervation of Intra-cranial Blood-vessels.

That the nerve-fibres follow the course of blood-vessels in the membranes enveloping the brain has long been known, but upon the subject of the innervation of the cerebral blood-vessels

there has hitherto been no certain information. Whilst some writers assume that these vessels are innervated, others assume the contrary. What is more to the point, able investigators have stated that in the vascular plexuses of the brain no nerves are to be found ; and that whilst nerves can be traced to minute arteries in the brain, they cannot be followed to their termination. To this statement Kölliker gave the weight of his authority in his *Gewebelehre*, and we believe it has been generally accepted. Recent writers have stated that the musculature of the blood-vessels, not being under nerve influence, has only the value of an elastic membrane. There would seem to be much inherent improbability in such a view, but evidence adequate to controvert it has been lacking. It is therefore satisfactory that later research gives considerable ground for replying to the question as to the innervation of the intra-cranial blood-vessels in the affirmative. In 1897, Obersteiner figured a preparation in which nerves were shown on the smaller arteries of the pia by means of chloride of gold. This rendered it probable that other intra-cranial vessels possessed their own nerves. In a paper just published Dr. A. Morison states that he has succeeded in staining the nerves "coursing with the vessels of the pia mater" in the fœtus of the cat. The preparations were treated by Sibler's hæmatoxylin method. Dr. Morison describes the nerves as "twisting in some instances round the vessels, and terminating in a plexiform manner on them, the mode of termination being most visible on the larger vessels." The nerves are interrupted at intervals by a nuclear body. The author describes and figures ganglion cells also, in the nerve-trunks. Further research will doubtless be made in this direction, and embrace in its scope the minute vessels within the brain substance and those of the vascular plexuses It is to be hoped that definite warrant may be obtained for the conclusion that the intra-cranial vessels have the ability actively to contract and dilate, and that light may thus be thrown upon a question of great pathological importance.

Phthisis in Asylums and the Segregation of Phthisical Cases.

When an asylum has, as compared with asylums in general, a high mortality from phthisis, the reports of official inspectors,

which of necessity are largely comparative, are apt to strike a warning note, with allusions to over-crowding and insanitation. That these evils exist, singly or combined, in most asylums not of very recent date is probable enough. But the physician on the spot, with his considerable knowledge of the district from which the asylum draws, may be excused if his own view is at variance with that of the occasional inspector, in that it ascribes a preponderating influence in the causation of the phthisis which his asylum shows to heredity and to unfavourable environmental conditions obtaining at the patients' homes. We can conceive the case of an asylum drawing largely from a population engaged in dust-producing occupations, an institution against which the reproach of over-crowding and insanitation could not be brought, but which, nevertheless, has a high rate of phthisis. Again, institutions drawing from the western parts of the kingdom, from amongst the dwellers on the "Celtic Fringe," numbers of whom pass their lives in valleys and upon bleak hillsides, where mists and sleet are more familiar than the sun's rays; the scattered populations amongst which intermarriage and imbecility are respectively almost necessary and inevitable; institutions drawing from such communities should, we think, be accorded a large measure of official indulgence in respect of criticism of the kind above mentioned.

Putting aside the question of the mode of origin of phthisis in asylums, and turning for a moment to that of the condition as it exists, and its treatment, we are disposed to think that very little has been done as yet in the way of segregation of phthisical cases in these institutions. This, we are aware, is a well-worn theme, but yet one by no means practically disposed of. At the present time, when general attention is being directed to the risk of contagion in phthisis, and the desirability of destroying phthisical sputum, and of segregating the patients, it is opportune to revert to the question as it presents itself in asylums. At present cases of phthisis are commonly, we believe, accommodated in the hospital ward, or other continuous observation ward, in association with other patients; and in many asylums the hospital contains, in addition to ordinary sick patients, cases requiring continuous observation on account of their mental state, but who physically are comparatively well. This undesirable association of phthisical

with other patients, some of whom are sure to be promising cases for recovery, is doubtless fundamentally due to reasons of economy. That is to say, there is often hesitation in laying before committees plans for the erection of a special ward for phthisical cases, the provision of which would entail increased expense, in the way of addition to the nursing staff and arrangements for extra sick nursing. It is to be hoped that the governing bodies of asylums may be brought to participate in the enlightenment of the public, now in progress, in respect to the means by which phthisis is spread, and by which the risk of infection is reduced. Asylum physicians will then make their recommendations on segregation with more confidence of a practical issue thereto.

The Psychological Section at the Edinburgh Meeting.

Adequate notice of this meeting was unfortunately crowded out from the October number of the JOURNAL,—it is unnecessary to say from no want of interest or value, as the reports in the present number will testify.

Sir John Batty Tuke's address on the "Modern Conception of the Etiology of Insanity" was conceived on the most advanced lines of thought, with the scientific insight and practical suggestiveness which we are accustomed to expect from him.

The more thorough appreciation of the causes and of the pathology of insanity, certainly justifies the hope expressed by Sir John, that considerable improvement in the treatment of the insane will result at no distant date. This, as he suggests, will especially follow on the improved medical care in the earliest stages of disorder, by the wider appreciation of these conditions by the general body of the profession. We heartily join him also in condemning the delays in treatment under the English law, but we cannot hope that there will soon be any improvement in this respect; progress in this direction is certainly not within the range of practical probabilities at present.

Drunken Women.

The Liquor Commission has drawn from an eminent surgeon the remarkable statement that female drunkenness, in his ex-

perience, had been traced almost without exception to physical and mental suffering. Generalisation from special experience is always apt to be misleading, and this is probably an exceptionally striking instance of the untrustworthiness of one-sided views.

Neurologists and alienists, in the class of cases coming to them, might similarly say that female drunkenness was in large measure due to neuropathic or insane heredity ; the general physician, especially in towns, would probably ascribe a large proportion to the *tædium vitæ* and want of interests or occupation amongst the women of the middle class ; whilst the prison surgeon would probably find the predominant cause in prostitution and irregular habits of life.

The fact of such a sweeping generalisation can only, therefore, be taken as an evidence of the very strictly limited class of cases on which the observation was made.

That treatment of drunken women in inebriate homes is "fundamentally wrong," as this hasty generaliser asserts, must certainly need the qualification "in regard to those who require other, possibly surgical, treatment." Even with this qualification the assertion is erroneous, for the inebriate habit when once fully established will often endure after the original cause has long ceased to exist or operate. Total deprivation is, in the experience of most physicians, a fundamental necessity of cure when cases have reached this condition from whatever cause ; and the diminution of the facilities of obtaining drink, which this confident writer apparently does not consider important, is by common experience proved to be of essential value.

Conclusions based on inadequate or one-sided experience, if sufficiently, strikingly, and boldly put, are very attractive to the public mind, and so constitute a real danger in questions which have ultimately to be decided by public opinion. The small modicum of truth renders the error still more pernicious by rendering the falsity more easily acceptable.

Flimsily constructed conclusions such as these cannot be too forcibly reprobated, or the habit of making them too much discouraged ; this habit, to borrow an expression from the building trade, might be appropriately stigmatised as "jerry generalisation."

The Frederick Case.

The Christian Scientist question has been very prominently before the public recently in connection with the death of Mr. Frederick, an author and writer of some repute, on whom an inquest was held.

Christian Scientism has been negatively described as being neither Christian nor scientific ; positively it is perhaps the finest example of irrationality that has ever obtained a widely accepted credence. The fact that it is credited to have obtained acceptance by 200,000 persons in America, comprising many of the so-called educated classes, is a source of astonishment, but gives also reason for thought.

Education is such a widely misapplied term. Persons who have learned certain subjects—Latin and Greek, for example—are generally termed educated ; but it often happens that this degree of learning is little more than an exercise of the memory ; the judgment and reason having been either dwarfed or left quite uncultivated. The want of observation and judgment in the mere bookworm has long offered a subject of amusing ridicule to the novelist and dramatist, and the lack of these is certainly the basis of the acceptance of such a farrago of nonsense as Christian Scientism by these " educated " classes.

Persecution or prosecution of the professors of this craze is to be deprecated, as only giving the advertisement they desire. Left strictly alone, these monstrous mushroom growths decay as speedily as they spring up ; and although sympathy must be felt for their victims, this is considerably soothed by the reflection that they are of a class who, in any event, would probably not have aided greatly the progress of human development.

Over-burdened Children in Germany.

Under the above title lately appeared in a Manchester contemporary a very interesting account, by an English lady, of a holiday visit to Herr Trüper's educational institution for backward and mentally defective children at Sophienhöhe, near Jena. Here is the home of between thirty and forty boys and girls who are " not as other children are," mostly of the higher social

class, for the average payment (we have heard) is not far from £100 per annum. Herr Trüper and his wife personally superintend the establishment, which has a staff of three trained male teachers, four female teachers, two nursing sisters, a gardener, and a joiner, besides domestic servants. The daily routine is as follows :—Rise at 6 a.m., first breakfast at 6.30, lessons (none more than forty-five minutes, with intervals for play), 7.15 to 9 ; 9 to 10, recreation and second breakfast ; 10 to 1, lessons ; dinner, 1.15. After dinner, rest or recreation ; and in the afternoon lighter tasks such as singing and drilling. It is stated that in every case the lessons, rest, and play are carefully arranged with a view to the physical and mental capacity of the child ; but we would venture to remark that such a time-table as that above set forth would be beyond the endurance of the British feeble-minded child, however well adapted to his German congener. We are not informed what proportion of time is given in the daily instruction to manual and mental work respectively ; but four and three quarter hours of school before dinner, however varied, seems to us a case of "*Nimia diligentia magistri.*" The time-tables of our own training institutions for mentally feeble children of a similar class to those received by Herr Trüper show but from two to three hours' school-work in the morning, and—what we miss in the German plan—a distinct interval for active physical exercise, such as a smart walk or game of cricket, before dinner ; while the couple of hours in the afternoon are usually devoted to manual training, music, and other matters not calling for much mental exertion. We fear, indeed, that such a curriculum as Herr Trüper's would tend to aggravate rather than relieve the "over-burdened" condition of the backward British child.

The writer of the article is evidently not completely informed as to all that has been done of recent years in this country for the education and training of mentally feeble and other exceptional children. In addition to the old-established institutions for idiots and imbeciles, there have sprung up of recent years several educational homes for children incapacitated by mental or physical infirmity for ordinary school life, most of them under medical direction, but not (as stated in the article) "all very expensive" as compared with Herr Trüper's. The National Society for Promoting the Welfare of the Feeble-minded seeks to supplement the "special classes" established

by several of the school boards of England by supplying residential accommodation and training in useful industry after school age in the case of children of poor parents, while there are some half-dozen that receive similar pupils of a higher social class at various rates of payment. One advantage that these latter have over Herr Trüper's establishment is that as a rule they do not receive pupils of so wide a range of incapacity as he does ; and there is no doubt that the higher grades of feeble-minded children are better dealt with if entirely separated from those properly designated *imbecile*. Herr Trüper's work in carrying on a "help-school for the higher schools" meets an undoubted social want ; and we are glad to know that the scientific as well as the practical aspects of the subject occupy his attention.

Juvenile Criminals.

The Commissioners of Prisons for England and Wales in their last report comment upon the very slight improvement in the educational status of the criminal classes since the passing of the Education Act, and attribute this greatly to the fact that one eighth of the child population of the country do not appear on the books of any elementary schools. There can be little doubt that this results from the lax administration of the law by the magistrates, and the inherent difficulties of dealing with those most in need of school discipline. A hasty judgment attributes the outrages of Hooligans to the inadequacy of education as a reforming force, and recalls the magnificence of the promises of improvement as compared with the poverty of performance. It is true that the school boards have been captured by the faddists and the incompetent in too many instances, that the thorough teaching of elementary knowledge has been sacrificed to unnecessary extras, that education in the wider sense, as affecting the conduct of life in the light of modern science, is almost everywhere an unknown quantity ; yet it is to educational institutions that we must look for the desiderated improvement in the less favourably placed classes of society. It is sufficiently discouraging for those children who pass from the comfortably equipped school-house to a squalid and deteriorating environment, but these at least are

brought into contact with law and order, and shown a more excellent way. The waifs and strays who evade the civilising effects of such education as is theirs by legal enactment must now and hereafter constitute a danger to the State which should be averted by every reasonable means. We discover no panacea in training the criminal class to read, write, and cypher; much more is required to fit their offspring for the duties of citizens; in just proportion to our ineffective dealings with them will be the resulting danger to the commonweal.

What can be expected of the truant Hooligan but that he shall develop into an habitual offender? And when he has reached this stage of his career his treatment is quite as inadequate as when he was less capable of mischief. The Prison Commissioners state that the tendency to shorten sentences passed upon this class of criminal increases the number of them at large, to the public detriment. That is a very serious statement and must attract very serious attention. It is assuredly high time to call for consideration of the problem in face of such an authoritative opinion. No doubt the reformatory system has somewhat fallen into disrepute, but much good work has been done by industrial schools, and many a boy has been saved from vice and disaster by the training he has received in them. We require more modern methods in dealing with these incorrigible offenders. There is necessity for an intimate oversight of the children of degraded parents, there is further necessity for classified prisons which shall be truly reformatory institutions where prolonged detention shall be really salutary to the criminal as well as beneficial to the general public.

Punishment of the Insane.

The modern treatment of insanity has been developed from the basic fact that the insane are not responsible for their actions. Hence it arises that an asylum is a school for all the Christian virtues. Forbearance and kindliness, fortitude and forgiveness, resolute patience and temperate conduct are inculcated on all who hold positions of trust in our institutions for the mentally afflicted. Dr. Mercier places this in the forefront of *The Attendants' Companion*: "Above all things no attendant

must, under any circumstances whatever, strike a patient or punish one in any way." And we have no doubt that he would make that necessary rule applicable to every official in his dealings with those under his care and protection. How comes it, then, that Dr. Noott has been moved to reiterate what has been for so long and so definitely accepted as inevitable and unalterable? Is it because Dr. Mercier was determined "to make our flesh creep," and thus command consideration of problems which must be met and decided in courts of justice? We who live within the narrow sphere of asylum routine stand in constant danger of ignoring nice points which have to be debated in the great world. Dr. Bristowe calls our attention to the difficulties of diagnosis, the obstacles to appropriate treatment, the grave responsibilities of general practice in reference to insanity. These are in great measure settled for us on the admission of the patient under all the accumulated restraints of a complicated law. If insanity were an entity, something which could be weighed and measured with indubitable results, these discussions would not arise. But there are cases in regard to which a definite decree must be pronounced, in regard to which opinion is conscientiously divided, and life and death may hang in the balance. It is admitted that the youngest of us is not infallible, and as experience grows so does judgment become more cautious. We have had wise councillors and legal precedent pronouncing for the doctrine of partial responsibility; and in that direction lies more hope for the future of the race than in the absolute negation of any such possibility. By an acceptance of that doctrine we occupy a position enabling us to plead for the reformatory treatment of habitual drunkards and instinctive criminals, for those who by heredity and environment and habit are so deteriorated in mental condition that they drift on the borderland of insanity. It is for courts of justice to condemn to punishment, and to reduce punishment to proportions appropriate to whatever extenuating circumstances may have been proved in evidence. The medical profession has nothing whatever to do with these awards of rightfully constituted authority. Medical witnesses are entitled to a respectful hearing, and to a careful consideration of their evidence only in so far as they speak that they do know, and testify that they have seen. Until their science is perfect we see, fortunately, no chance of their being constituted judge

and jury. In disputed cases, where there is room for difference of opinion, the grave responsibility of deciding lies with those who have been trained to sift evidence, and those who have been approved by their professional forensic skill. We do not agree that medicine should trespass on law.

No doubt, as Sir Henry Maine admits, social necessities and social opinion are always more or less in advance of law, for law is stable and society is progressive. When we are in a position to show how the law may be improved, our duty will be clear. Meanwhile we, as an association, have but lately declared that we have no suggestions to offer.

Let us clear our minds in regard to Dr. Mercier's position. He urges that deprivation of awards in asylum life constitutes punishment. Naturally that is forcibly and indignantly denied. Perhaps he has been looking up Mark Twain's legal studies, wherein it is proved that the intention constitutes the crime, and perhaps his next excursus will be yet more horrific. Meanwhile his use of the word, which inevitably suggests retribution in the Mosaic sense, as applied to the ordinary methods of asylum treatment cannot but irritate. Medicine is concerned with treatment, it has nothing to do with revenge. A turbulent patient may be severely punished by a blister, and may even regard its application as a proof of vengeance, while the physician is satisfied that it is necessary and proper irrespective of any outrage which may have been committed. He has to correct patients, to make right what has been wrong ; he has to discipline patients, to instruct them, and to regulate their actions ; he is debarred from punishing patients in the sense of inflicting pain and measuring out retribution. It is absolutely necessary to make considerable mental reservations in applying the term punishment to the withholding of awards. If we grant that this is punishment how severely is the average man treated when he is slighted by Fame and Fortune ! Indeed, in pursuing this vein of thought we begin to feel acutely wronged since none of us has been ever yet honoured with a K.C.B.

The invidious meaning of the tabooed word is well brought out by Addison, that master of the English language : "When by just vengeance impious mortals perish, the gods behold their punishment with pleasure."

We positively cannot picture Dr. Mercier a party to these spiteful pleasures of imperial Jove, whether the impious mortals

are adjudged sane or insane; and, while agreeing with Mr. Herbert Spencer that "harmonious co-operation, by which in any society the greatest happiness can be attained, is made possible only by respect for one another's claims," it falls to the asylum physician to induce that co-operation amongst anti-social units not by the process of punishment, but, again in the words of that great master, "by the regulation of conduct in such a way that pain shall not be inflicted." And our position is that our ordinary institutions are unsuitable for dealing with those of strongly marked anti-social proclivities threatening great risks to the community, but that these should be dealt with in special asylums provided by the State.

Lunacy in New Zealand.

The condition of the asylums in the colony of New Zealand seems from the report of Dr. Macgregor to be in a most unsatisfactory condition, as will be seen from the following extracts. The total number of registered lunatics in the public asylums at December 31st, 1897, was 2386. The admissions in 1897 were 532. The increment for the year was 108, and it is foreseen that there will be well over 100 added each year. Certain work is in hand, but if that were now finished and occupied, there would still be a deficiency of room for 158 patients; in other words, there are now 234 patients in excess, which will be reduced to 158 sooner or later; but meanwhile patients are added at the rate of 100 per annum, and there is no further accommodation in sight.

The results of such a pressure on space are shown thus:

"At Seacliff during the year we had a terrifying experience of the evils of over-crowding. During an epidemic of septic pneumonia, ten persons died, and in the words of Dr. King, their deaths must be credited to the over-crowded state of the asylum.

"At Seacliff we have been compelled to use the entertainment halls for dormitories, a state of things which only the direst necessity can excuse, for it cannot be justified.

"At Auckland day after day patients complained bitterly of being unable to sleep, and when one finds that a whole dormitory of women is kept awake by one woman in another, it is

very distressing to know that one must look on without a remedy, when a remedy can with moderate ease be provided.

"At Christchurch fifty-two male patients (out of 276) in excess of the dormitory accommodation are scattered all about the building, sleeping on shakedowns on the floor."

The causes of this crying evil are to a certain extent those with which we are familiar in this country,—the sending in of old people who are a little troublesome, cannot take care of themselves, or have incorrect habits. It is bitterly complained that many of these cases might well be taken care of by their sons and daughters, who selfishly prefer to tax the country rather than do their duty to their aged relatives. There is no further room then for the acute cases, and Dr. Macgregor points out:

"This being the condition of our asylums, it seems hopeless to induce medical men and the friends of patients who are showing symptoms of incipient mental disease to commit them to our care, when even with our present means much could be done in the way of prevention that is impossible without legal control in private houses. No man can exaggerate the terrible consequences to many unfortunate persons of the natural horror of committing dearly-loved friends to institutions which are well known to be so over-crowded that their proper treatment cannot be hoped for. The early treatment of the mentally diseased in many cases offers the only chance of restoring sanity. Many for the want of this become hopeless dements for life."

There does not seem to be much hope of better things until there is a thorough change in the lunacy system of the colony. As long as the Government finds not only the buildings but also the maintenance, the local ratepayers are not likely to scan very closely the fitness of the patients sent in to profit by board and lodging. In fact the tendency must be to get rid of any one who may require assistance from local revenue. In our own grant of 4*s*. a week for asylum patients, some recognise a mischievous tendency in this direction, but there is the consoling fact that if by reason of this tendency the asylum is blocked up, those who send in patients on the least pretence of insanity have themselves to bear the cost of finding expensive accommodation to replace that which is misused. But not only in this respect is the present system of New Zealand wrong. The Government should under no circumstances whatever be the provider of asylum accommodation. It should, on the other hand,

be in a position to insist on the laws, which it has itself passed, being obeyed. This it cannot do while it combines in its own body both functions. It surely must be a scandalous condition of affairs when Dr. Macgregor, its own energetic and able officer, feels compelled to publish such appeals as this :

" If our Parliament would escape the charge of inhuman apathy in the treatment of the mentally diseased, they must at once insist on sufficient accommodation in our asylums, and as soon as possible thereafter they will make separate provision for the criminal insane and for idiots and imbeciles."

He ought to be in a position to not only warn the Government that the insane are not properly treated, but also to receive explicit instructions to see that justice is done to them ; and further to receive instant support in steps taken for that purpose. Lunacy administration should never by any possibility be the subject of party attack, and we fear from information received from a source unconnected with this question that there is more than a suspicion this way.

Another great advantage of such a change is that Dr. Macgregor himself would be withdrawn from any responsibility in the management of the institutions themselves. The whole system at present is too involved. Though all parties may be working for one good end, yet, as we find in this country, independence in office and the powers of criticism incident to that independence are on the whole very healthy. The duties of the executive authority, of its officer, of the local provider of accommodation and of its officer, the medical superintendent, must be separated and well defined in order to produce the best forms of lunacy administration. On behalf of the latter officer, and indeed of all asylum officers, we have to enunciate a principle which experience has shown to be incontrovertible,—a liberal and just appreciation of their claims is in the end true economy.

While thus strongly urging that adequate measures should be at once adopted for the proper care and treatment of those afflicted with the most terrible disorder which can incapacitate humanity, we do not write in ignorance of the difficulties under which the colonial Government labours, and the pressing claims on their attention on every hand ; but we feel assured that public opinion will not at this time of day suffer neglect and parsimony in dealing with the insane.

Part II.—Reviews.

The Fifty-second Report of the Commissioners in Lunacy, England, London, 1898. Pp. 468. Price 2s. 2d.

The Commissioners in Lunacy have to chronicle in their report to the Lord Chancellor for 1897 an increase of 2607 patients in the number of "officially known insane," and this increase, though less by 612 than that of the preceding year, swells the aggregate of lunatics within the Commissioners' cognizance to 101,972, a number sufficiently large to cause all interested in lunacy matters the most serious thought. Apart from the grave question of adequate accommodative provision for so enormous an accumulation of insane—a matter the Commissioners very properly dwell upon annually—it is, we think, our duty to enter an earnest protest against the inaction of the Lord Chancellor in not having, long ere this, augmented the number of active Commissioners beyond the three legal and three medical gentlemen who at present have to perform three times the amount of onerous duty which their predecessors in office, forty years ago, were called upon to do. Why the Commissioners should in their annual reports so timorously shrink from hinting even at the advisability of an increase in their numbers we are at a loss to understand, and it is not entirely on behalf of the insane whose detention and proper care they have to supervise that we would suggest to them to ask for an increase in their number. That the Board performs its work admirably, notwithstanding the heavy duties thus imposed, we all know—it is, perhaps, uncalled for to utter any such laudation—but it must strike the least observant among us that many more years of useful labour could have been secured to the State from men who have, as quite recently has happened, fallen by the way through illness, the result, it cannot be doubted, of the heavily pressing and anxious work through which they have had to go. The duties of visitation and report on the existing asylums, hospitals, and licensed houses alone are already sufficient for at least a dozen Commissioners; and when to this arduous and restless routine work there are added the innumerable responsibilities of other official obligations, it is, to say the least of it, a matter of surprise to note how well this small body of workers bears the strain. We want another social pioneer to preach the evils of overstrain, not in Board schools this time, but in the Lunacy Office. The cause of this oversight—for such we presume it to be—is no doubt the fact that the authority presiding over lunacy matters is never sufficiently long in command to properly investigate the needs of the department; perchance a few more years of office may rouse the present Lord Chancellor to a revision of the constitution of the Board of Commissioners.

The table dealing with the classification and distribution of this huge mass of insane humanity—assuming for the moment that it is good statistics to take a censal enumeration of the insane thus—shows that the major increase has occurred among paupers, these being 2·75 per

cent. higher than last year, when the largest known increase had to be recorded. That *quæstio vexata*, the increase of insanity in our midst, has temporarily been shelved by the more sensible distinction that lately has been drawn between a real increase in the number of officially known lunatics and a fictitious increase of insanity; and the stirring times in which we have lately been living must make us thankful for the absence this year in the lay press of those annual irritating diatribes on lunacy and its increase. It is only when other sensational matter runs short that the daily press expounds its immature and chaotic views on a subject of which its knowledge is infinitesimal.

The summary of insane patients known to the Commissioners on January 1st, 1898, when compared with a similar summary of ten years ago, will give us some clue to the reason of this increase in the number of pauper patients. While in 1888 16·3 per cent. of pauper insane were confined to ordinary workhouses, the ratio percentage of these in 1898 was only 11·9, notwithstanding an increase of 11·5 per cent. in the actual number of insane paupers. The inference to be drawn from this is that many more of the workhouse insane are now relegated to asylum care, and that the extra attention they there receive tends to their longevity, thus diminishing the recovery rate and swelling the number of aged paupers in all institutions.

The tables furnished by the Commissioners in this year's report differ in no great respect from those of previous years, and the same dreary columns of figures are served up for the edification of the statistical tyro. We last year particularly drew attention to the repetition year after year of certain tables dealing with ratios to population, &c., tables which serve the purpose merely of misleading the casual reader of this report; and we have merely in so doing acted up to our convictions, for we cannot be persuaded to the belief that they are serving any really good purpose. To others, however, we can give due appreciation. No one, for example, can deny that the ratio of insane paupers to paupers of all classes, both known quantities taken on the same date, furnishes us with the most trustworthy barometer we possibly can have of the prevalence of insanity in our midst. Regarding this table, then, we find that while the ratio of paupers to estimated population has for the last ten years remained practically stationary (ranging between 2.87 and 2·59 per cent.), the ratio of known pauper lunatics to known paupers has gradually increased in the decade from 9·25 to 11·08 per cent. On this most interesting table the Commissioners, however, do not venture to remark. The increase thus noted has sufficiently frequently been commented upon in these pages, and we shall not weary our readers with reiterations. The mere recognition of this fact that, notwithstanding the great increment per annum of pauper insane (the annual average increase being 2373 for the last five years), the ratio shows for the same period no larger variation at any time than ·98 per cent. of total pauper lunatics to total paupers, must be a convincing statistical proof (if statistics can prove anything) that insanity is a constant for that section of the community. All other ratios of insane to population must, if fairly considered, be discarded as fallacious and misleading.

The total number of admissions into the various institutions for the

reception of the insane during 1897 was 19,045, an increase of 191 on the previous year's totals. The following table gives the increase and decrease in admissions during the year for the various institutions, &c. It will be observed that registered hospitals, which in the previous year presented a decrease in the number of their admissions amounting to 68, have admitted in 1897 57 more patients than in 1896.

	County and Borough Asylums.	Registered Hospitals.	Metropolitan Licensed Houses.	Provincial Licensed Houses.	Naval and Military Hospitals.	Criminal Asylum, Broadmoor.	Private single patients.	Idiot Establishments.	Total.
Increase . .	283	57	—	—	47	9	2	—	398
Decrease . .	—	—	114	68	—	—	—	25	207
Total increase									191

The Commissioners specially remark on the decrease in the total number under treatment in licensed houses, and the remarkable diminution in the number of their admissions; but this decrease is very easily explained by the larger number of private admissions into county asylums, licensed houses apparently no longer granting admission to those poorer paying cases which a few of the hospitals, of great wealth and specially endowed for this very purpose, have for so long neglected. In fact, the essential duties of some of these so-called charitable institutions for the insane seem now to have been taken over by county and borough asylums, hospitals being left a free hand more efficiently to compete with private asylums for well-to-do patients, unhampered by restrictive licences. Certified private patients appear from this table and last year's to be steadily on the decrease, and such a state of things cannot surely be wondered at while the law is being openly defied in the matter of the reception of uncertified insane into private residences.

The readmissions on fresh reception orders due to the expiry of previous reception orders are, as we predicted would happen five years ago, on the up-grade. The labour which this statutory obligation entails would have been simplified, for the Commissioners at all events, had the Act demanded an annual report on each patient instead of the present cumbrous system.

Recoveries during 1897 numbered 7230, an increase on the recovery total of the previous year of 52, and an increase on the average recovery total of the ten preceding years of 723. The actual numbers for the various modes of care remain remarkably similar to those of the previous year. The percentage of stated recoveries to the total number of admissions dropped during 1897 to ·64 per cent. below the average rate of the decade; and if, as last year, we calculate the recovery rate to the average number resident, we shall find that the proportion, viz. 9·31 per cent., is the lowest for the last twenty years. Why the Commissioners

should give us the calculation of deaths to daily average number resident, and not recoveries on the same basis, we cannot quite comprehend. The principle on which recovery rates were originally calculated was adopted to suit individual asylums, and merely for the sake of comparing recovery rates with those of other asylums; and the Commissioners have accepted this system as equally applicable to asylums in the mass, forgetting evidently that the recovery to average number resident is the genuine and the recovery to admissions merely the convenient gauge of a recovery rate. Individual asylum statistics certainly would be incorrect when, for comparison of its recovery rate with those of other institutions, the recoveries to average number resident were set forth alone; but taken in the aggregate, and where a year to year comparison of the recovery rate of all asylums is only required, it is the best method of calculation. The results of the two systems, though frequently showing equal variations for certain years, disagree in their quinquennial average ratios; for it may be observed that the ratio of recoveries to average number resident gives us exactly what we would expect to find—a steady and uniform declination in the recovery rate, due, as we pointed out last year, to the accumulation in all asylums of non-recoverable cases. The rational estimation of recoveries to admissions gives an inexplicable variation in its quinquennial averages. Seeing also how much closer a bond exists between the actual number of recoveries and the actual number resident than between recoveries and admissions, we must regard the former as the more delicate and trustworthy measure of the proportionate annual cures in all asylums.

Year.	Percentage ratios of recoveries to admissions.		Percentage ratios of recoveries to average daily number resident.	
1878	39·94		11·31	
1879	40·50		10·96	
1880	40·29	Average 39·97	10·77	Average 10·75
1881	39·72		10·51	
1882	39·41		10·22	
1883	38·50		10·28	
1884	40·33		10·30	
1885	41·99	Average 40·10	9·89	Average 9·92
1886	41·16		9·73	
1887	38·56		9·41	
1888	38·71		9·54	
1889	38·81		9·44	
1890	38·59	Average 39·21	9·87	Average 9·90
1891	41·04		10·58	
1892	38·94		10·08	
1893	38·45		9·95	
1894	40·31		10·13	
1895	38·18	Average 38·76	9·78	Average 9·74
1896	38·53		9·54	
1897	38·35		9·31	

The explanation offered by the Commissioners for this declination in the recovery rate, viz. that in recent years many more cases of senile dementia have been removed to asylums, is apparently a sufficient one when the recovery ratio to admissions only is considered; but another factor of equal importance, one to which we have drawn attention in previous years, which, moreover, is quite lost sight of in their recovery to admission calculation, viz. the gradual diminishing death-rate in all asylums, according to age periods, as age advances beyond fifty, gives us, together with such admissions of senile dementia, a better explanation of the altered recovery ratio. As both factors are taken into account in the rational estimation of recoveries to average number resident, it follows that this must be the more reliable method of calculation.

The total number of deaths during 1897 amounted to 7322, an increase over that of the previous year of 516, and this apparent augmentation is due probably to the low rate of 1896, which was the lowest in twenty years. This year's ratio of deaths to daily average number resident is ·25 per cent. below the average ratio per cent. for the last ten years. The table of age-period death-rates for the year 1896, calculated from some of the tables supplied by the Commissioners, is here again given.

Age periods.	Death-rate per 1000 reported insane, 1896.		Death-rate per 1000 whole population, 1896.		Insane to sane proportionate death-rate.			
					1896.	1895.	1894.	1893.
Under 5	M. — F. —	—	M. 59·3 F. 50·5	54·9	—	—	—	—
5— 9	M. 60·8 F. 38·0	49·3	M. 4·3 F. 4·3	4·3	11·4 to 1	17·5 to 1	25·5 to 1	8·5 to 1
10—14	M. 36·3 F. 37·9	37·1	M. 2·3 F. 2·3	2·3	16·1 to 1	28·0 to 1	22·9 to 1	25·0 to 1
15—19	M. 53·1 F. 68·2	60·6	M. 3·5 F. 3·4	3·4	11·9 to 1	11·4 to 1	11·1 to 1	14·6 to 1
20—24	M. 60·0 F. 52·0	56·0	M. 4·9 F. 4·3	4·3	13·0 to 1	9·0 to 1	11·7 to 1	12·1 to 1
25—34	M. 67·8 F. 58·3	63·0	M. 6·4 F. 5·9	6·1	10·3 to 1	11·8 to 1	10·4 to 1	8·9 to 1
35—44	M. 103·3 F. 53·6	78·4	M. 11·0 F. 9·3	10·1	7·7 to 1	7·5 to 1	7·5 to 1	7·9 to 1
45—54	M. 100·4 F. 56·1	78·2	M. 17·8 F. 13·8	15·8	4·9 to 1	5·0 to 1	5·1 to 1	5·7 to 1
55—64	M. 114·0 F. 75·4	94·7	M. 32·5 F. 26·4	29·4	3·2 to 1	3·2 to 1	3·7 to 1	3·3 to 1
65—74	M. 196·9 F. 137·6	167·2	M. 61·8 F. 53·0	57·4	2·9 to 1	2·7 to 1	3·0 to 1	2·5 to 1
75—84	M. 345·0 F. 243·7	294·3	M. 129·8 F. 117·2	123·5	2·3 to 1	2·1 to 1	2·7 to 1	2·3 to 1
85 and upwds.	M. 527·3 F. 503·4	515·3	M. 250·9 F. 232·8	241·8	2·1 to 1	1·5 to 1	1·3 to 1	—

Apart from the usual interesting numerical evidence of the variation in death-rate according to age periods in persons of unsound mind, this table furnishes proofs of the contention to which we have already

made allusion, that the insane death-rate tends to approximate to the sane death-rate as age advances, until in the last few decades of life it becomes nearly the same as the sane death-rate. For the sake of comparison we have added the insane to sane proportionate death-rates for each age period for the years 1893 to 1896. Fluctuations, it will be observed, in these proportions occur principally in the earlier age periods, when acute symptomatic insanities are more prevalent, while the ratio remains remarkably steady for the mid age and advanced age periods. The large proportion of male deaths from thirty-five to sixty-four is due, in all probability, to the influence of general paralysis.

The causes of death are again tabulated, but although the number of deaths for 1897, according to Table V, is 7322, the Commissioners account in this table of causes of death for only 7298. Now that this table has appeared for three years it may be interesting, merely for the sake of comparison, and not for any rash deductions, to summarise the percentages of the principal causes to the total number of deaths here given for each year.

Causes of death.	1895.	1896.	1897.
General paralysis	20·00	20·41	18·97
Phthisis pulmonalis	14·88	13·88	14·57
Senile decay	7·71	8·69	9·31
Pneumonia	7·01	6·36	6·13
Cardiac valvular disease	4·78	5·73	6·02
Epilepsy	5·16	4·89	4·66
Exhaustion from mania and melancholia	3·87	3·62	3·65
Organic disease of brain	2·60	3·50	3·46
Apoplexy	3·16	3·21	3·13
Chronic Bright's disease	2·92	2·56	2·72
Cancer	2·01	2·56	2·13
Bronchitis	2·89	2·46	2·09
Accident	·40	·42	·45
Suicide	·25	·14	·28
Other maladies	22·36	21·57	22·43

The table dealing with the number of patients admitted into various institutions during 1896 according to their mental disorders—the Commissioners, be it noted, still patronising their ancient "classification" of mental affections—if continued annually for a few decades, may prove valuable in giving us some idea as to the correctness of the investigations of Parchappe, Esquirol, Aubanel, Thore, and others as to the influence of season on the occurrence of insanity, but any deductions from their own tables are not yet warrantable. Already has the sweeping decision made by the Commissioners last year for 1895 been upset by a variation in the incidence of insanity in 1896.

We regret that we cannot, so long as the Commissioners' classification of mental disorders is maintained, attach much value to Table XXI, that showing by a yearly average the forms of mental affection in patients admitted into institutions during the five years 1892 to 1896. The Commissioners are not, however, alone to blame in this, for our

own experience of "statements" and "reports" furnished to their office by superintendents and managers of asylums proves that this unscientific classification is one very widely adopted. We should, however, be pleased to learn what is meant by "dementia—ordinary;" is it amentia, stupor, stuporous melancholia, sequential dementia, paralytic dementia, imbecility, or what? There are asylum superintendents who regard some one or other of these terms as synonyms of dementia. Mania and melancholia, moreover, as we remarked last year, being but symptoms, are expressive of so many varied insanities that their grouping in this manner gives one but little idea of the prevalence or proportionate occurrence of symptomatic and true insanities. It would certainly be gratifying were all reports to the Commissioners' office so framed as to give a more definite value to the varieties of mental affections beyond the elementary and unsatisfactory division into exalted, depressed, and impaired mental states. Were this done we should probably find "other forms" showing a much higher percentage ratio than at present. Table XXIII certainly gives us some clue, so far as epileptics and general paralytics are concerned, and from this we gather, comparing the percentage proportion for the five years 1892 to 1896 with that of the preceding quinquennium (if a deduction can with propriety be drawn), that general paralysis appears to be making no serious advance in the proportionate number of those admitted to asylum care, while the proportion of pauper and private general paralytics is almost identical for the past five years, the antecedent five years having shown an excess of 2·1 per cent. of pauper over private cases. One cannot help being struck in looking at this table by the vast preponderance of female paupers over female private general paralytics (the former being 3·5 times as great as the latter), and this is no mere statistical accident, but proof of a clinical observation that general paralysis occurring in women affects the lower strata of society more than the upper, and especially those subjects who have been infected with syphilis.

Intemperance in drink maintains its stated influence as an exciting cause of insanity, and the quinquennial percentage proportion to yearly average shows an advance on the previous five years' percentage of 1·1 per cent. for males and ·8 per cent. for females. We cannot, however, accept the figures as to the influence of "venereal disease;" surely a more careful investigation into the previous histories of patients should reveal in so wide-spread an affection a larger percentage than 1·8 for males and ·5 for females. The table (XXV) is one open to many other serious objections and can only be accepted as an approximate estimate of the causes of insanity, for reasons we have dwelt on in previous years; and this remark applies with greater force to Table XXVII—that dealing with the causation of general paralysis,—which conveys no trustworthy information whatever, for the percentages are nearly the same as those of other insanities. We had no knowledge until looking over these tables that heredity was so prominent a factor in general paralysis. Clinical and pathological evidences as to the ætiology of this disease are quite at variance with this table.

The information obtainable from Table XXXI as to the yearly average of suicidal cases among the single, married, and widowed inmates of

asylums, serves as material for the cynic, for married males appear to be the most numerous.

We have purposely this year refrained from commenting upon some of the statistical tables of this report, though our conviction remains unaltered. When we compare the information gleanable from foreign official reports with that so sparsely supplied in our own, we can but confess that we are lagging grievously behind the times.

We are aware that the abstract of accounts of the registered hospitals given in Table X of Appendix B is not one from which trustworthy conclusions can be drawn, but we cannot help noting from the figures supplied how pitifully some of these hospitals fail in carrying out the charitable element of which they pose as the champions. Hospitals which on their own showing have a surplus of receipts over expenditure of 43, 26, and 21 per cent., while their average weekly receipts per head come to £3·72, £2·79, and £2·46, cannot be doing much for the many deserving poorer class patients.

The number of boarders continues to preponderate in registered hospitals, 195 having been received during the year in eleven of these. Manchester Royal Hospital admitted 53, and Holloway's Sanatorium 77. Of the total number 62, or 31·7 per cent., had to be certified and detained as patients; one committed suicide and four died. Can it be that these figures indicate that many boarders are received into institutions merely to escape the trouble and publicity of outside certification? Which reminds one of the recipe for hare soup—"First catch your hare."

The admissions during 1897 into the 74 county and borough asylums amounted to 16,447, or 2317 in excess of the decennial average. Of these admissions 16·1 per cent. were patients readmitted into asylums from which they had previously been discharged. The recoveries came to 6189, and the deaths to 6659; in 5548 (according to Table XV), or 83·3 per cent., post-mortem examinations were made. The Commissioners give the percentages of post-mortem examinations made for 1897 and 1896 as 79·3 and 79·4; our calculations from their own figures make the percentages 83·3 and 79·9 respectively.

The very satisfactory evidence of the vigilant care with which the large numbers of suicidal cases in county and borough asylums are supervised cannot be passed over without favourable comment. On going through the eleven suicides which occurred during the year, one, we find, was committed prior to admission, two occurred during leave of absence, and of the remaining eight four were certainly not due to any culpable neglect; so that only four suicides out of a probable 61,909 suicidal cases (calculated from the Commissioners' figures) can thus be entered as the result of want of due care. Five of the eight suicides were by hanging, one was the result of a cut throat, one due to scalding, and one to swallowing foreign bodies. The accidental deaths numbered fifteen, six of which were either directly due to or accompanied by fracture of ribs; only two died from suffocation during epileptic fits, one from impaction of food in the gullet, two from injury to or rupture of the bladder, one each from fracture of the skull and jaw, one from poisoning by yew leaves, and one from injuries

inflicted by a fellow-patient. There is one eminently satisfactory item in this list, the small number (only two) of deaths from suffocation during epileptic fits.

Pilloried in the insanitary list there are no fewer than twenty-one county and borough asylums (one of these has figured in this category regularly for the last eight years, one appears six times in eight years, another five times, and so on, the names recurring with unpleasant persistency), and it would certainly be of value could the Commissioners give particulars of the sources of water-supply, the state of the drainage, and the methods of sewage disposal of these asylums in which evidences of insanitary condition so frequently recur.

Table XIII, Appendix B, which is new, presents information as to the "care and treatment of patients in county and borough asylums," though such diverse particulars are recorded as the percentages of epileptics, general paralytics, post-mortem examinations (this can hardly be classified either as "care" or "treatment"), bedsores found post mortem, chapel, entertainment, exercise and employment percentages, and the length of service of attendants. The column dealing with general paralysis shows in a measure how this affection predominates in seaport towns and industrial centres, but the bedsore column is rather misleading, it being scarcely logical to infer that, because in one asylum 22·0 per cent. of post-mortem examinations revealed the existence of bedsores against 0 per cent. of another, the latter bestowed so much more care on its nursing.

Broadmoor is a State asylum or prison for criminal lunatics, and so should escape ordinary criticism, but the custom that obtains there of permitting self-seclusion is for such an institution a peculiar one, on which the Commissioners remark that "patients who could not thoroughly be trusted should not have access to single rooms, where they could shut themselves in and escape observation," this being their comment on a suicide by hanging, an exactly similar case having occurred in 1896.

In their remarks on licensed houses generally—there are, by the way, 71, and not 70 licensed houses—we can cordially second the Commissioners' observations as to the utter absence of all considerate treatment by many licensees of the nurses and attendants in their service, and it is a matter of little wonder that the nursing staff of the majority of private asylums should be so inferior and so constantly shifting when inadequate thought is given in many houses to their comfort and well-being. The Commissioners consider that attendants or nurses sleeping with patients should always have their keys attached to their persons at night—*fiat experimentum seipsis*. From the remarks made by the Commissioners in their reports on licensed houses, some licensees and managers of provincial houses would appear to be somewhat ignorant of the rudiments of modern methods of care and management of the insane, and it is just by these few ill-conducted and ill-conditioned establishments that the majority of private institutions are judged by the public. The Commissioners surely have the power, or if they have it not they should certainly acquire it, of influencing quarter session authorities to limit the granting of licences only to such applicants

as have had a proper experience in the management of the insane. There would then, perhaps, be less censure and less rancorous denunciation as to the iniquity of private asylums *en bloc.*

Single patients remain almost stationary in number, and the remark made by the Commissioners last year as to the reception of non-certified patients could with propriety have been made again; true, the Commissioners were able during 1897 to bring one solitary instance to light, but there are hundreds pursuing this calling, some having the audacity openly to advertise that patients can be received without the necessary certificates.

Two legal decisions from the law officers of the Crown were obtained by the Commissioners, one to the effect that a charge above the usual 14*s.* rate may be made by county asylums receiving out-county patients, and the other relative to the reception of British subjects in foreign asylums. We cannot quote these legal decisions here, but the practice of sending British subjects to foreign asylums must surely be due to a defect in our lunacy law, and the difficulty present certification entails must surely be that defect.

It is usual in these reviews to pass over without much comment the reports on the various public institutions visited by the Commissioners, for we have always felt that they have partaken of the nature of confidential communications to the Lord Chancellor as to the working of individual asylums; but though rash, it would perhaps not be unserviceable to draw attention to this very patent fact, that there are not half a dozen asylums in which the Visiting Commissioners have not found some ground of fault-finding. Even the most recently constructed asylum, the plans of which have just passed the Board, come under their adverse criticisms, and we cannot but regard this inclination towards censoriousness as an evidence of the overstrain to which we alluded at the commencement of our review.

It was with profound regret that every asylum officer in the country learnt of the sudden death of Dr. Wallis. His untimely decease, and the recent resignation of Dr. Southey through ill-health, serve as warning texts to the authorities that it is time to relieve the active members of the Lunacy Board by timely addition to their numbers.

Fortieth Annual Report of the General Board of Commissioners in Lunacy for Scotland. Edinburgh, 1898. Pp. 165. Price 1s. 3d.

The total number of lunatics in Scotland under official cognizance at the end of 1897 was 14,906, which represents an addition during the year of 406, made up of 73 private and 333 pauper patients. The increase in the former amounted to 67 in royal asylums, 1 in district asylums, and 5 in private asylums; while pauper patients increased by 556 in district asylums, and 69 in lunatic wards of poorhouses, and decreased by 193 in royal asylums, 86 in parochial asylums, and 13 in private dwellings. The total increase in establishments was 419, of whom 73 were private and 346 pauper patients, which is considerably

over the average for the five years 1891-5. The accompanying table shows the total number of lunatics and the manner of their distribution on 1st January, 1898.

The number of private patients admitted was 570, being 88 more than in 1896, and 36 more than the average for 1890-4, and the admissions of pauper patients amounted to 2713, being 68 more than in the preceding year, and 285 more than the average for 1890-4.

Although a larger number of patients have been discharged recovered during the year, taking into account the increased admission rate, the recovery rate in all classes of establishments, as is seen in the following table, shows a distinctly downward tendency.

Classes of establishments.	Recoveries per cent. of admissions.			
	1890–94.	1895.	1896.	1897.
In Royal and District Asylums . . .	39	35	36	36
In Private Asylums	38	26	40	32
In Parochial Asylums	43	46	41	35
In Lunatic Wards of Poorhouses . .	7	6	6	4

That this is largely due to the altered character of the admissions, *e.g.* the increasing number of cases of advanced years, is very probable; and the same argument would apply to the increase in the death-rate of this as compared with the preceding year, which applies to both private and pauper patients and to all classes of establishments.

Classes of patients.	Proportion of deaths per cent. on number resident in all establishments.			
	1890–94.	1895.	1896.	1897.
Private patients	7·6	6·5	6·8	7·4
Pauper patients	8·7	9·2	7·9	8·5
Both classes	8·5	8·7	7·7	8·3

Classes of establishments.	Proportion of deaths per cent. on number resident.			
	1890–94.	1895.	1896.	1897.
Royal and District Asylums . . .	8·8	8·4	7·6	8·3
Private Asylums	6·3	10·8	6·4	7·2
Parochial Asylums	9·6	10·8	10·1	11·0
Lunatic Wards of Poorhouses . . .	4·6	5·7	3·7	4·2

Number of Lunatics at 1st January, 1898.

Mode of distribution.	Male.	Female.	Total.	Private.			Pauper.		
				Male.	Female.	Total.	Male.	Female.	Total.
In Royal Asylums	1,833	2,180	4,013	817	928	1,745	1,016	1,252	2,268
In District Asylums	2,606	2,624	5,230	51	80	131	2,555	2,544	5,099
In Private Asylums	51	91	142	51	91	142	—	—	—
In Parochial Asylums, *i. e.* Lunatic Wards of Poorhouses with unrestricted licences	682	737	1,419	—	—	—	682	737	1,419
In Lunatic Wards of Poorhouses with restricted licences	447	474	921	—	—	—	447	474	921
In Private Dwellings	1,115	1,652	2,767	37	76	113	1,078	1,576	2,654
	6,734	7,758	14,492	956	1,175	2,131	5,778	6,583	12,361
In Lunatic Department of General Prison	42	14	56	—	—	—	—	—	—
In Training Schools	231	127	358	101	63	164	130	64	194
Totals	7,007	7,899	14,906	1,057	1,238	2,295	5,908	6,647	12,555

The diminished number of recorded accidents and escapes speaks more eloquently than anything else could of the increasing care and vigilance exercised by all those who are responsible for the welfare of asylum patients. Even with the increase of numbers, the escapes were fewer by three than in 1896, and the suicides were only four as compared with twelve, while the total fatal casualties only increased by five during the year.

Since 1890 there has been a fairly steady decline in the proportion of pauper patients who are accommodated in private dwellings, and this has not in any way been checked in the year under review. In their report for the preceding year the Commissioners expressed the view that this was due to the restriction of licences for more than two patients and of the tendency to unduly large aggregations of patients. This can only, however, be a partial explanation. Comparing the year 1890, when the number so provided for attained the maximum of 23·6 per cent., with 1897, it is found that while the decrease for the whole country amounts to 1·6, there are six counties, all rural with the exception of Edinburgh, where increases have taken place, while the remaining counties all record decreases of various amounts from 0·3 in Aberdeen to 20·4 in Kinross. Perhaps with more prosperous times the economic burden of providing for the insane poor is felt less now than formerly; at all events the greater part of the country does not seem to be increasingly impressed with the importance of this method of provision from the financial point of view, and the constantly reiterated official recommendation is to all appearance proving insufficient to stimulate the local authorities to the further development or even the steady maintenance of the system.

The increase in the absolute numbers of the insane would at first sight lead one to suppose that there is a "growing tendency to insanity among the community," and this supposition would seem to be further strengthened by the fact that while the increase of population during the year 1897 was only 0·77 per cent. the total number of lunatics has increased in the same period 2·88 per cent., or in other words the ratio of lunatics to population has risen from 336 to 344 per 100,000. These facts indicate certainly a growing accumulation of lunacy, but the question of greatest moment is not so much accumulation, "with its small social but great fiscal importance," but, is the occurrence of insanity increasing out of proportion to the increase of the population?

The proportion of lunatics appearing for the first time on the register to population (Table V, Appendix A) has for the past twenty-four years been a more or less steadily increasing one, and the ratio for the year under review is the highest yet attained, and this might be considered as legitimate evidence that there is a disproportionate increase of insanity. But the question is in reality a complicated one, and to come to even an approximately accurate conclusion there are several factors which must be taken into account.

The increase in the total numbers of the registered insane in relation to population, it is generally agreed, is due to simple accumulation, brought about by a diminution of the discharge rate among that class; and the apparent increase of occurring insanity is, there can be little

doubt, to be attributed not to an increasing tendency to mental breakdown among the people, but chiefly, if not entirely, to these two causes,—an increasing disposition to transfer unregistered lunatics to the registered class, and to include under the designation of lunacy cases which in former years would not have been regarded as coming within the limits of certifiability.

The same tendency to bring the unregistered within the official cognizance in all probability applies to Scotland as it does to England, where the percentage proportion of the unregistered to total insane diminished in the intercensal period 1881–91 from 13·5 to 10·9, and this would go a long way to explain the apparent increase.

One of the points which has an important bearing upon the question is the ages of the insane at the time of their admission, and this is very exhaustively dealt with by the Commissioners in this report. The comparison that is made between the admissions of the two years 1885–6 and 1896–7, though it would no doubt have been more valuable had longer periods and larger numbers been taken as a basis, goes to show "that a greater number of lunatics are, from whatever cause, being sent to asylums; that as regards private patients the increase is confined to persons of middle and advanced age, and as regards pauper patients, that though the numbers admitted have increased at all ages, much the greater proportion of the increase is contributed by persons of middle and advanced age." It is more than questionable that old age is in these later years more liable to mental breakdown than formerly. Rather is it that the limits of certifiable insanity are being gradually widened and made to include cases which were not until recently regarded as requiring asylum treatment. Constant reference is made to this change in asylum reports. In England the proportion of first attacks per cent. of admissions has in the past five years increased from 70 to 70·6; and that a large amount, if not the whole, of this increase is due to the inclusion of senile cases is proved by the fact that old age as an assigned cause of insanity in the same period increased from 5·5 to 6·5 per cent. of patients admitted.

Once this source of increase becomes exhausted, and unless other causes arise (*e. g.* the relegation of all violent anarchists to asylums as dangerous lunatics, as Dr. Samways recently and quite soberly suggested), there ought to be a noticeable improvement in the lunacy records of the country. Dr. Rayner as far back as five years ago ventured to express the opinion that insanity in reality was not even remaining stationary, but was actually diminishing; and a careful examination of the statistics of recent reports would lead one to the conclusion that his view is likely to prove correct. The five years ending 1896, for instance, have been characterised in England by a steady diminution in the proportion of general paralysis, which in the preceding fifteen years had been steadily increasing, and these are cases which occur practically only in the prime of life. And, again, the puerperal state, which applies equally to the same life-period, figures less and less as a cause of insanity, and that in spite of the fact that there is no diminution in the number of deaths in the community generally from puerperal fever and other accidents of childbirth. That this change, which is noticeable

in England, has yet commenced in Scotland is not quite so apparent. The proportion of admissions to population in the former is during the past three years a diminishing one, while in the latter it is the reverse. But, on the other hand, the proportion of general paralytics who have died in asylums is sensibly less in 1897 than in the preceding year, when it appears to have attained its maximum.

The increase of lunacy is, as one would expect, very far from uniform throughout the country, and the remarks which the Commissioners make in comparing the absolute numbers of 1897 with 1896 do not give us much insight into the changes, if any, that may be taking place as regards increasing tendency or otherwise to insanity in the various counties. Dividing the whole country into three groups of eleven counties each, it is found, on comparing Table 18 of Appendix A of this report with that of the report for 1887, that of the eleven counties which show the greatest increase of the average numbers intimated as pauper lunatics over periods of ten years, seven belong to the north, and four are lowland; while of the eleven in which the increase is less than, or equal to, the general average, seven are lowland and four are highland. The county which shows the worst record in this respect is Elgin, while at the other extreme is Peebles. The association of Peebles and Pleasure is traditional, and who shall say if this further association of sanity and pleasure is mere coincidence? Pleasure—the Peebles variety—and level-headedness are here shown going hand in hand. We confess our ignorance of the precise nature of this Peebles pleasure, and we do not by any means wish to suggest that it is synonymous with whisky, but nevertheless it is an undoubted fact that those counties where drunkenness is most prevalent are exactly those where lunacy is least rife.

The improved condition of affairs as regards mental health, which, as noted above, applies to the lowland counties where the industrial classes predominate, bears out a view which we have already had occasion to express, viz. that it is in those parts in which the lunacy rate is already a low one that further improvement is more likely to be effected. The tendency is for the energetic and fit to desert the poorer localities, leaving the relatively unfit behind, and to seek the industrial regions where labour and higher wages are assured; and it is difficult to see how the increasing lunacy of the rural and isolated parts of the country with their undiminishing stagnation of population is to be remedied. In the industrial parts, on the other hand, a change in the direction of betterment, mental and physical, has, we think, been taking place in later years, and is beginning to make itself felt. That we have in cycling, in football, and in athleticism generally, which have of late years taken such hold upon industrial communities particularly, agencies which ought to go a long way to counteract the acknowledged evils of urban and industrial life, hardly admits of doubt, and the indications of an improved and improving condition of affairs contained in this report lead us to believe that the years to come will be marked by a progressive improvement in the mental health of the inhabitants of the more populous areas, an improvement which may possibly be more than sufficient to counterbalance the retrograde tendency of the more rural parts of the country.

Forty-seventh Report of the Inspectors of Lunatics, Ireland, for the year 1897.

Novelty is not a feature which is to be looked for in a Lunacy Blue Book. Much the same dry facts, much the same still drier figures, have to be stated and commented on. It requires a cook of quite exceptional culinary genius to serve up the same ingredients continuously in palatable form. And mental pabulum, such as is supplied in reports of this kind year after year, becomes at length rather insipid, and palls upon the intellectual palate. In this latest report of the Irish inspectors there is a good deal of mere reiteration with a few changes of figures. We notice, however, one small concession, which may be regarded as the *ne varietur* of this particular issue, in the shape of a short table giving the admissions from workhouses into district asylums for the past eight years. It may not be overstepping the bounds of modesty if we surmise that the introduction of this table was suggested by some remarks on the subject which we ventured to make in reviewing the Inspectors' report for 1896. If so, we are grateful, and in any case we welcome this table as a useful one, and—dare we hope it?—as an instalment of an improved system of statistical tables altogether, in which, as we urged last year, the figures should, as in the English tables, be given for a series of years, from which comparisons and deductions could be drawn, and not merely the numbers for a single year, which—standing by themselves—as a basis for founding conclusions upon are absolutely valueless.

Even in this table the very point which it might be calculated to clear up appears to have been overlooked. Within recent years there has been a general and well-grounded impression that the number of transfers of insane patients (uncertified of course) from workhouses to asylums has considerably increased, and that this fact accounts, at least in part, for the continued increase of patients under detention in asylums, while not at all denoting an increase in insanity. Certified insanity has increased at the expense of uncertified, that is all. That this is a correct inference is supported by the statement of the Inspectors that "in 1880 the ratio of insane in district asylums to the total number under care was 67 per cent., and in workhouses 27 per cent. In 1897 the ratio in asylums had risen to 75 per cent., while in workhouses it had fallen to 21 per cent." More precise data, however, are required to make this inference a certainty; and these are furnished in the table under review, according to which, on the computation of the Inspectors, 14 per cent. of the admissions into asylums during the period 1890 to 1897 were transfers from workhouses. But this calculation *in globo* does not show whether these admissions denote a *progressive* increase; and that is just the point which it is desirable to ascertain. This information can be supplied by an additional column to the table, giving the percentage of admissions from workhouses to total admissions for each successive year. The return thus completed reads as follows:

Year.	Total number of admissions.	Admissions from workhouses.			Percentage of workhouse admissions to total admissions.
		First admissions.	Readmissions.	Total.	
1890	3,095	306	90	396	12·79
1891	3,010	297	84	381	12·65
1892	3,181	329	94	423	13·29
1893	3,207	349	89	438	13·65
1894	3,229	376	84	460	14·24
1895	3,216	413	75	488	15·17
1896	3,329	459	89	548	16·46
1897	3,285	435	111	546	16·62
Totals .	25,552	2,964	716	3,680	14·36

From the last column it will be seen that the proportion of transfers from workhouses has increased from 12·79 in 1890 to 16·62 in 1897, denoting a rise of close on 30 per cent. in eight years. That there has been, therefore, a progressive increase in the number of patients transferred from workhouses to asylums may be regarded as an established fact.

In connection with these figures, however, there is one possible source of fallacy. Of late years there has been an increasing tendency on the part of relatives, in order to save trouble and expense to themselves, to send insane patients to the workhouse infirmaries, on the pretext of illness, and then leave it to the union officials to have them certified and sent on to the asylum. Such patients are not, of course, workhouse patients at all, properly speaking. This fact, to a certain extent, but probably not largely, discounts the increase as shown by the above table.

We subjoin the usual summary showing the number and distribution of the insane in establishments on the 1st January, 1898, as compared with the preceding year.

	On 1st January, 1897.			On 1st January, 1898.		
	Males.	Females.	Total.	Males.	Females.	Total.
In district asylums . . .	7,680	6,361	14,041	7,945	6,653	14,598
In Central Asylum, Dundrum .	145	20	165	150	20	170
In private asylums . . .	318	358	676	325	366	691
In workhouses	1,636	2,356	3,992	1,657	2,373	4,030
In prisons	—	—	—	1	2	3
Single Chancery patients in unlicensed houses . . .	45	47	92	49	49	98
Totals . . .	9,824	9,142	18,966	10,127	9,463	19,590

The total increase for the year was 624, which was again in excess of the increase in the previous year, 609. By far the largest part of this occurred in district asylums, 557 ; but there was a decrease in the number both of total admissions and of first admissions into these institutions, the former by 44 and the latter by 13. But this has occasionally happened (now for the fourth time during the past ten years), and has no significance whatever. The daily average has risen from 13,735 in 1896 to 14,340 in 1897, an increase of 605, which is less than the corresponding figure for 1896 by 48. No favourable nference, however, can be drawn from this. The daily average has increased largely during the past three years, which show an increment of no less than 1735, whereas that for the previous three years was only 961, not much more than half. And if we examine the figures for the past twelve years we find that the average increase for the first three years was 303, for the second 317, for the third 320, and for the last 578. From the record of daily averages we are, then, reluctantly compelled to admit that the aggregate of insane under detention is not only on the increase but largely on the increase, and there is nothing to indicate a cessation of the process in the near future. According to the last census there were nearly 5000 lunatics and idiots at large, and there are at present some 4000 in workhouses, and until these, or at least all of them who can be legally certified as insane, become so certified. we must expect a substantial increase in the amount of registered lunacy with each succeeding year. Two things, and two things only, so far as statistics enable us to judge, are likely to put a limit to the progressive increase of insanity, using the phrase in the popular sense ; and these are the complete absorption of the uncertified insane into the ranks of the certified, and an increased mortality in the inmates of asylums owing to a large number of them having reached an age when death would naturally terminate their existence. That this condition must be reached sooner or later may be regarded as an absolute certainty, otherwise there would be no limit to the increase of insanity.

This conclusion is, of course, based on purely statistical grounds, and on the assumption that pretty much the same number of persons will continue to go mad every year. But there is just a possibility that public opinion and practice may eventually become sufficiently enlightened to take deliberate measures to control the causes of insanity. And in this direction lunacy reports might be made to render valuable aid. These reports are made nominally to the Lord Lieutenant, but in reality to the nation at large. They are reviewed in the press, and occasionally articles are written upon them in some of our periodicals. By this means the information conveyed in them is distributed amongst a somewhat larger circle of the public than the very small minority who read the reports themselves. It is not usual, no doubt, for writings of this class to take a didactic form, and yet to whom can the public—the public who are constantly clamouring about the increase of insanity, and demanding an explanation – look more appropriately for enlightenment than to the highest officials of the department. A note of warning, authoritatively given and with no uncertain sound, as to the folly of imprudent marriages, and unbridled indulgence in

drink, *the* two great prime and essential causes of insanity, might have a salutary effect. Not once nor twice should such warning be given, but it should be repeated again and again and again, with that "persistent iteration" by which alone unwelcome truths can be forced on public attention, until at length people would be led to understand the full significance of their own responsibility in the matter, and could no longer plead ignorance, nor shift the blame off their own shoulders, for at least a considerable share in the growth of this enormous evil. The mere publication of a table giving the number of cases in which heredity and intemperance were assigned as causes is sure to be barren in results, and a mere handful of people ever read it. A weighty pronouncement, coupled with some words of warning in earnest and forcible language, and inserted in the body of the report, would not be inconsistent with the official character of the document, and might have a widespread influence for good. It is absolutely certain that insanity is originated and perpetuated by the two causes above mentioned. It is equally certain that both are largely under the control of men themselves, if they would only exercise it. It is nothing more nor less than a public duty of the first importance that every official in the service, from the highest down, who is cognizant of the facts, should bring them prominently, and with untiring persistence, before the notice of the public.

Not long ago we read of a society founded in America, the members of which—ladies only—bound themselves under a solemn obligation never to marry into any family in which there was a hereditary tendency to cancer, tubercle, drink, or insanity. "Love laughs at locksmiths," and it is possible that some of these fair folk may have found their fortitude give way under the pressure of circumstances, but, at any rate, it was a well-meant effort on their part to stem the progress of disease and maintain the vigour of their race. It would be nothing short of Utopian to hope or expect that such views will ever become universal. It might not be desirable, it would certainly inflict hardship and sorrow on thousands, if such principles were carried out to their fullest consummation; but it is hardly to be denied that if generally, or even partially followed, after one or two generations this would have the effect of averting an untold amount of suffering from the human race.

While on this subject of the causes of insanity, we must protest against the absolute uselessness of Table XIII, "Showing the probable causes of insanity in the patients who were admitted into district asylums." It is worse than useless, it is misleading. Some years ago this table consisted of two columns, one giving the predisposing, the other the exciting cause. For some incomprehensible reason this form was abandoned, and one cause only allowed to be stated in each particular case. Now any one with even a moderate experience in insanity knows perfectly well that rarely, if ever, is an attack due to a single cause, and hence where two or more causes are operative, an asylum superintendent when making the return has to select which of them he considers to have been most potent, and enter it as the sole cause. Take a case, for

instance, where an attack of insanity is due, as it so frequently is, to a combination of heredity and drink. Which is to be assigned as *the* cause? One man considers heredity the more potent factor, another drink, and each makes his entry accordingly. The result is that discrepancies of the widest description are found under the various headings in the returns from different asylums. It is scarcely credible that heredity should exist in hardly 7 per cent. of the cases admitted into one asylum (Ballinasloe), and in 38 per cent. in the case of another (Richmond); or that only a little over 3 per cent. should be due to drink in some districts, as in Monaghan and Sligo, while the proportion in the Richmond Asylum and Enniscorthy was 18 and 21 per cent. respectively. It would be preposterous to draw any inference whatever from such figures. The only rational method of recording the causes of insanity is to enter every contributory cause for every case where ascertainable, and the sum total under each etiological heading will give the true record of the number of cases in which any one cause was alleged to exist. We would respectfully urge on the Inspectors a return to the older form of this table, and in this way they would be only following the practice of the English Commissioners. Tables of causation are always unsatisfactory owing to the insufficiency of information procurable, but it is desirable that we shall obtain as near an approximation to the truth as is possible.

The recovery rate in 1897 was 36·3 per cent. on the admissions as compared with 37·2 in 1896, and 39·3 in 1895. This decrease in recoveries is what we should expect, as of late years the number of senile cases sent to asylums has considerably increased, and in these recovery is rare, and as a rule temporary. The rate, as usual, differs immensely in the various asylums, ranging from 23 and 25 per cent. in Sligo and Mullingar, to 54 and 57 per cent. in Maryborough and Carlow respectively. The death-rate averaged 7·6 per cent. on the daily average, being lowest in Kilkenny and Castlebar (4·1 and 4·3), and highest in Omagh, Letterkenny, and Carlow (16·2, 11·8, 10·1). In Omagh the high mortality was due to an epidemic believed to be influenza of the gastro-enteric form.

Three deaths were due to suicide; two cases of drowning occurred, it being doubtful whether they were accidental or intentional; five other fatal casualties were recorded, and one death following injuries as to which it could not be ascertained whether they had been received before or after admission. There were thus eleven deaths in all from suicide or accident, as against six in the previous year. In more than one of these cases the asylum officials, in the opinion of the Inspectors, could not be regarded as altogether free from blame. The number of fatal casualties last year is large for Ireland. There was also an unusual number of deaths due to zymotic diseases or affections arising out of insanitary conditions, 60 in all. The most serious epidemics were one of epidemic pneumonia with typhoid symptoms in Mullingar, influenza in Omagh, and a fresh outbreak of beri-beri in the Richmond Asylum, which attacked 238 patients and eight members of the staff. The symptoms, however, were mild, and the mortality trivial, but it seems as if this foreign importation, having once got ingress into the Richmond

Asylum, means to stay. It is surprising that during some of the several outbreaks the contagion has not spread outside the walls of the asylum into the city of Dublin, and both the citizens and the asylum staff are to be congratulated on the restriction of the disease within such comparatively narrow limits.

The number of autopsies increased to 255 from 220 in the previous year. The increase is creditable though small. We have dwelt in former reports upon the many difficulties which attend the advance of morbid anatomy in Irish asylums. It must be said that in former times this study was not greatly encouraged, and its pursuit did not bring any reward proportionate to the time and trouble which it costs. Besides, the repugnance felt by the rural population to the bodies of their friends being "opened" is often very great, and in a country where the people cling to old customs and prejudices with an almost pathetic tenacity, it may be some time before this feeling is quite overcome. It is to be said, further, that few of the Irish asylums are large enough to afford room for a special pathologist, and the ordinary staff of an asylum rarely contains anyone who can find time or energy for such special work. We can hardly agree with the Inspectors' opinion that the comparative infrequency of post-mortem examinations in Ireland is due "mainly to the want of suitable means for carrying out scientific investigation," for this is itself a result of the other causes. We remember, too, what excellent work poor Ringrose Atkins did when he was an assistant with exceedingly scanty equipment and without encouragement. We should say that the most convenient and the most feasible method of promoting scientific investigation in Irish asylums would be to establish three or four laboratories, one in each of the large asylums, which would be fed in various senses by the smaller asylums as well as by the institutions in which they stand. This plan seems to work in an admirable way in Scotland, and, as many of our readers know, is contemplated in various English districts, where the asylums are not of that huge size that enables each to support its own laboratory and pathologist. Outside the morbid anatomy of the nervous centres, there must be an immensity of work to be done in the Irish asylums in connection with modern aids to diagnosis, bacteriological and pathological work, which must be done somehow if the institutions are to keep pace with the other hospitals of the day,—work which can only be carried out in a well-equipped laboratory. Seeing how supremely important scientific investigation in these fields has become, this is likely to be soon a matter demanding attention.

The deaths from general paralysis are decidedly on the increase, as from a small table in the Report we calculate that for the three years 1892 to 1894, the proportion of deaths from this cause to the total deaths averaged 2·38 per cent., while in the last three years it has been 3·9, a rise of 63·8 per cent. The total number of deaths from this cause was forty-two, twenty-eight of which occurred in the Richmond Asylum. The country districts continue almost free from the disease, no deaths being recorded from it in over a dozen of the district asylums.

The deaths from consumption for the past eight years average 27·8

per cent. on the total mortality. From the figures it does not appear that the disease is gaining ground in asylums; but neither is it lessening, as in 1897 the ratio, 31·4, happens to be the highest in the series, the lowest being in 1891, when it was only 24·2. As usual the returns under this head show wide variations. In Kilkenny no deaths are recorded from this disease, and in Enniscorthy only one, whereas in Carlow over 56 per cent. of the total deaths were due to consumption, in Cork over 46 per cent., in Sligo and Killarney over 38, and in Monaghan over 35 per cent. The other asylums occupy a mean position between these extremes. It seem useless to speculate as to the cause or causes of such great differences. Soil, no doubt, has a good deal to say to it, and in asylums where space is limited the difficulty of isolating tubercular patients. But that one asylum should, even for one year, be absolutely without a single death from phthisis, and another with only one fatality from that cause, is a remarkable circumstance; while the fact that in others it accounted for from 35 to 56 per cent. of the total mortality looks as if in these institutions some special inquiry were needed to discover, if possible, any conditions which might play the part of a predisposing or exciting cause.

The average cost per head for maintenance was £23 2*s*. 7*d*., Mullingar again heading the list with £30 12*s*., and Ballinasloe bringing up the rear with £18 6*s*. 5*d*. Castlebar, Kilkenny, and Sligo are all under £20 per annum. These financial arrangements may be highly satisfactory to cess-payers, but unless all commodities are quite exceptionally cheap in these districts, it is a question whether justice can be done to the insane in the matter of regime and treatment on such economical terms.

Of the 3285 patients admitted during the year, 2431 were committed on warrant as "dangerous lunatics," a proportion of 74 per cent. No comment is made on this in the body of the Report, but in his report on the Ballinasloe asylum the Inspector dwells at some length on this subject. He attributes the rapid increase of patients in asylums in great part to "the facility with which the relatives or friends of persons showing any degree of mental aberration or degeneration can procure their transfer to the district asylums, under the provisions of the Dangerous Lunatic Act, 30 and 31 Vic., cap. 118," and then he goes on to say: "Now, what is the usual procedure in this country? An information is sworn in accordance with the 10th section of 30 and 31 Vic., cap. 118, before two justices; a medical certificate is given that the patient is dangerous, and a committal order is made out. All this is so simple and convenient in practice for the relatives of alleged lunatics desiring their detention in lunatic asylums, that it has entirely superseded the admission form which requires the sanction of the governors, although there is no pretence that the majority of persons committed under the Act are in any sense 'dangerous,' other than that all, or nearly all lunatics may be, or may become, dangerous. It is clearly undesirable that so many lunatics should be described as specially dangerous, who are not properly so; and it is, in my opinion, in many respects a most unfortunate procedure that so many of the insane are in this country sent to lunatic asylums on committal warrants instead of 'House' forms."

A most unfortunate proceeding no doubt, but one that nothing but an Act of Parliament can remedy. And the expression of opinions of this sort in an asylum report, however true and applicable they may be, will have no more effect, we fear, than beating the air. We commented at some little length in our columns last year on this anomalous feature in Irish lunacy administration, and any further observations on the subject would probably be as much thrown away as if they were delivered in the same medium as that selected by the Inspector. But it does seem strange that although this evil system has been condemned by every authority who has ever written upon it, including a Parliamentary commission, so far absolutely nothing has been done, not a single step taken towards its abolition, and the Inspectors seem only able to sit as passive onlookers at a system upon which they never tire of passing wordy condemnations, while, as far as action in the matter is concerned, their hands seem tied or powerless. Is this *non possumus* attitude to go on indefinitely? We can scarcely believe that if the matter were taken up in right earnest a short Act could not be passed through Parliament assimilating lunacy procedure in this respect to that which obtains in England and Scotland. It is not an unreasonable supposition that the Lunacy Office is the proper place for the *initiation* at least of reform in lunacy practice. And when a system such as this has met with universal condemnation we confess to feeling a craving to know who or what is the obstacle to its abolition. The Inspectors, notwithstanding their numerous references to the subject in their annual reports, leave us completely in the dark as to whether any or what measures have at any time been taken with a view to bringing about the desired result, and in the absence of such information we are almost compelled to the conclusion that official inertia is at the bottom of it all. One thing is certain, as long as the present Act continues in force, and as long as human nature remains the same as it always has been, no amount of exhortation, nothing that anyone can say, either to magistrates or people, will have the smallest effect in preventing or even checking the results which naturally flow from such a piece of legislation.

The Inspectors note some improvement in the treatment of the insane in workhouses, but only in some of the unions, particularly as regards the appointment of trained nurses to supervise them; and in some workhouses the lunatic wards have been provided with a better class of furniture, hair mattrasses having been substituted for straw, and in a few instances even woven wire has been introduced. The sanitary arrangements have been improved, water-closets, lavatories, and a bath having been provided in several unions where they did not exist before. Boards of guardians have actually been known to supply delft chamber utensils for the dormitories, although why in one case the male patients alone have been accorded this luxury, and in another only the females, it is not easy to understand. Possibly it might cause too great a shock to carry out such a radical reform on too extensive a scale! *Festina lente—lentissime*—that is the guardian's motto. However, he has shown himself capable of recognising the need of endeavouring to ameliorate the lot of the hapless folk under his charge, and we will hope

that his ideas and his charity will expand as time goes on. But that there is a large field for the further development of the humane treatment of the insane in workhouses is quite clear from numerous entries in the several reports, such as that their condition is unsatisfactory; wards over-crowded, dark, and unventilated; exercise yard cheerless and depressing; only place for exercise is a narrow yard, surrounded by high walls and buildings, without a tree or a blade of grass; cells with flagged floors still in use; old wooden bedsteads, some of the old "harrow" pattern, with straw ticks; no fixed bath; no hot water supply for bath; sheds for day-rooms; bedridden cases in a neglected condition; two patients sleeping together in one bed; bedding very dirty, and covered with fleas; some patients without shoes or stockings; hair neglected and filthy, &c. &c. All this is rather dismal reading. It is painful even to think of these poor creatures consigned to this death in life existence, victims of "man's inhumanity to man." The writer can fully corroborate the strictures of the Inspectors from personal observation of the condition in which patients are often sent from workhouse to asylum, their skin and hair caked with filth, and swarming with vermin.

The whole question of the condition of lunatics and idiots in workhouses is now being taken up by the general public and by the Press, a movement which will, we trust, be attended with good results. "Evil is wrought by want of thought as well as want of heart," and it is probable that only a comparatively few realise at all that there is such a class as the workhouse insane; many, no doubt, do not even know of their existence; those that do know have kept silent too long.

The reports on private asylums are on the whole favourable, that on Hampstead Asylum (Dr. Eustace) especially so. With regard to the rest a perusal of the reports leaves the impression that they are not in a perfectly satisfactory condition; there is just something wanting to make them as comfortable and cheerful as such institutions ought to be at the present day. In Ireland, however, the straitened circumstances of probably most of those who are obliged to seek the shelter of an asylum preclude the payment of anything like liberal fees. The proprietors of private asylums are consequently not in a position to make any large outlay on improvements, while luxurious appointments, such as are seen in English and Scotch asylums, except in very rare instances are absolutely out of the question. As long as the provision of accommodation for persons of small or moderate means is left in the hands of private persons who have to make their living in this way, much improvement can hardly be looked for. The Inspectors have made frequent reference to this subject, and in their latest report call attention to it. "From year to year we revert to this subject in the hope that lunacy legislation dealing with the matter may be introduced, enabling the local authorities to erect in connection with, but entirely apart from the public asylums, accommodation for patients paying sufficient to defray the whole cost of their care and lodging." It is more than probable that such institutions could not be altogether self-supporting. The average cost of maintenance of a pauper patient in the district asylums is about £23. If asylums such as the Inspectors

suggest were provided we may assume that all patients who could pay over the pauper rate would be located in them. But the majority of them would probably pay sums varying from £25 to £40 per annum, or perhaps £50 or £60 in a few cases, and this scale of payment would hardly be sufficient to fully equip and carry on establishments provided with the comforts and conducted with the liberality now deemed necessary in order that the insane may have the best possible chance of recovery. Hence they will have to be, in part at least, supported by public money. It is not improbable that under the new Local Government Act, which will come into force in the course of this year, boards of governors will be empowered to make such additions to the district asylums as are suggested by the inspectors.

In drawing attention to certain flaws and omissions in the Inspectors' report, we have not the least desire to in any way detract from its general value, and we trust that any remarks of this kind which we have felt ourselves constrained to make will be accepted in the same spirit in which they are offered. We are anxious that these Annual Reports should give as accurate and comprehensive a sketch as possible both of the progress of lunacy and of Irish asylum work. We believe that if the Inspectors could see their way to adopt some of the suggestions offered, especially as regards the statistical tables, the value of their work would be considerably enhanced, the reports would have more of the quality of completeness which they do not now possess, and would in time become full and trustworthy works of reference for any student of the literature of lunacy in this country.

The Origin and Growth of the Moral Instinct. By ALEXANDER SUTHERLAND, M.A. Two vols., demy 8vo, pp. 784. Longmans: London, New York, and Bombay. 1898. Price 28*s.*

When we consider how intense is the mental activity of a certain kind that animates our brethren in the great continents of America and Australia, it is a matter for wonder that from these young, vigorous, active, energetic nations no great creative work has as yet proceeded. Among all the copious multitude of mechanical devices which America produces with such abundant fertility, there is no great mother-invention which, like the steam engine, the hydraulic press, the printing-press, the spinning-jenny, the power loom, or the electric telegraph, is the fertile parent of a thousand others. Nor has any great epoch-making discovery yet been made in these young countries. No far reaching generalisation, no novel methods of research, does the world owe to their speculation or their ingenuity. Not only have they produced nothing to compare with the theories of gravitation and evolution, the two most comprehensive generalisations to which the human intellect has yet attained, but, in particular sciences, no discovery of the first rank has yet been made by them. In vain we examine their achievements for any improvement in science comparable with, say, the differential calculus, with the undulatory theory of radiant forces, with

the correlation of forces, with the theory of chemical equivalence, with the spectroscope, with natural selection, with the localisation of cerebral functions, and so forth. It seems as if national youth, like individual youth, were a time of physical vigour and of mental assimilation, and that the earlier stages of a nation's life were unfavourable to original discovery.

If this speculation be true, the book whose name stands at the head of this article is evidence that the initial period in the life, at any rate of Australia, is passing away, and that that great country is entering upon a stage of development in which it will compete on equal terms with Europe for a place in the van of scientific progress. The publication of such a work would in any case be an important event in the history of mental and of biological science. Its publication by an Australian marks an epoch. It means that the era of really important discoveries by our kin beyond the sea has begun, and that henceforward we shall have to learn from them as well as to teach.

Mr. Sutherland's preface is a model of good taste. He ranks himself among the followers of Darwin, and speaks as if he were merely cultivating a field that Darwin had already reclaimed from the jungle. *Non nobis sed tibi da gloria* is his attitude. Such an attitude in an author is becoming, and it is doubtless true that but for Darwin's work the book could not have been written; but it is not in modesty alone that Mr. Sutherland shows himself a worthy disciple of his great master. His work is characterised throughout by patient, laborious research. To the support of every proposition he brings up his facts in battalions. His propositions are, many of them, wholly new. Some of them are startling. Some of them are repellent. But to nearly all of them he at length wins our assent by the completeness of the evidence which he adduces in their favour. To the extraordinary difficulty of his task the present writer is well qualified to speak, since he has for a considerable time been at work upon the same lines as Mr. Sutherland, and was preparing a work, which will not now be wanted, pointing to similar conclusions.

To give an outline of the book is for two reasons unnecessary. In the first place, Mr. Sutherland himself summarises the course of his arguments in what he calls a preliminary outline, and it would savour of presumption in a critic to attempt to improve upon what his author has done so well. In the second place, no student of mental science can afford to neglect the book. It is the most original and important work on mental science that has appeared for more than forty years. So far from examining over again the old problems, and wrangling on tickle points of niceness, such as whether the idea of space is innate or empirical, he imports into the subject a new method. He deals with the origin and growth of the moral instinct as a part of the great process of human evolution as conditioned by natural and sexual selection, and by the application of this new calculus he arrives at new conclusions. That the growth of mind in all its departments has proceeded in accordance with the law of evolution, has long been an accepted doctrine, although for many years Spencer's Psychology was but the voice of one crying in the wilderness. But until Mr. Suther-

land, no one, not even Spencer himself, has applied to any great department of mind the working of natural selection and sexual selection as set forth by Darwin, whose work on the limited subject of the expression of the emotions has been the sole excursus into this rich field of research.

Not all of Mr. Sutherland's propositions are established to conviction, but even those, such as the nature of the emotions, which appear the most open to objection, are admirably provocative of thought. In order to appreciate and admire his work it is not necessary, however, to agree with all his conclusions. It is enough to recognise how much he has given us of original thought, and with how much patient labour he has gathered the evidence in support of his novel propositions.

The style is always pellucid, and, if it rarely rises to distinction, it preserves a general level of dignity and placid comeliness very suitable to the subject. It is so little marked by the inclusion of expressions peculiar to the colonial and American variations of our tongue, that English readers will not find their attention diverted by unfamiliar diction.

Mental Affections of Children. By W. W. Ireland, M.D. Pp. 142. London: J. and A. Churchill. Edinburgh: J. Thin. 1898.

This is practically a second edition of 'Idiocy and Imbecility,' a work published by the author in 1877, but there are many additions. The present book represents his more matured views, and he has besides contrived to bring together scattered papers by various authors who have written on the subject of idiocy and imbecility. The chief additions are the pages on the Development of the Brain in Childhood, the Pathology of Genetous and Paralytic Idiocy, the chapters on Sclerotic and Syphilitic Idiocy, and that on the Insanity of Children. After two short chapters on the definition and statistics of idiocy and imbecility, he proceeds to give the causes, and rightly places neuropathic heredity at the head of the list. Under the heading of Genetous Idiocy he refers to the researches of Drs. Clouston and Eugene Talbot on deformities of the palate, and of the latter author on the degenerate ear. The pathological anatomy of this chapter has been added to, and some interesting remarks are made on the development of the infant's brain, from which we learn that when a child is born he has only one third of the volume of his brain; the second third is acquired before twelve months are over, and the remaining third between that time and the twenty-first year. Reference is made to the operation of craniectomy in microcephalic idiocy, and the author deprecates its use, as he truly says it is founded upon incorrect pathology. With regard to epileptic imbecility, Dr. Ireland holds the opinion of the late Dr. W. A. F. Browne, and also held by the author of this review, that the subjects of epileptic imbecility, when successfully treated, are cases in which there is most decided improvement. The chapter on paralytic idiocy contains an account of porencephaly, and references are given to the most

important papers on the subject. Sclerotic idiocy was first described by Bourneville fifteen years ago; it is a rare form, and the same remark applies to syphilitic idiocy. With regard to the former disease, the affection shows itself in the first few days, and generally before the expiration of twelve months after birth, and the frontal and occipital lobes are chiefly affected. Considerable space is given to the chapter on cretinism, and the thyroid treatment of sporadic cretinism is described, the evil results of over-doses being carefully pointed out. The chapter on insanity in children and insane idiots is much enlarged, compared with the former edition, and the fact that suicide in children is increasing in England and in almost all the Continental states is mentioned. Over-pressure in education is undoubtedly one of the chief causes, and in support of this we notice that in those countries where education is pushed on most strongly child suicide is found at its highest point.

We have nothing but unqualified praise for this work. It contains the observations of a physician who has carefully studied the subject for many years, and who has embodied in the book all that is known about it at present; we highly recommend it as an indispensable manual, not only to medical men, but to all who have to do with the management of idiots and imbeciles.

Recherches cliniques et thérapeutiques sur l'Épilepsie, l'Hystérie, et l'Idiotie: Compte-rendu du service des enfants idiote, épileptiques, et Arriérés de Bicêtre pendant l'année 1897. Par BOURNEVILLE (et huit collaborateurs). Vol. xviii, pp. 228. Paris: aux Bureaux du *Progrès Medical;* Félix Alcan, 108 Boulevard St. Germain. Price 4 francs.

In this annual publication we find not only a report of that portion of the Bicêtre and its dependencies used for the treatment and training of the abnormal children above described, but also much clinical and pathological information of general medical interest. The classification of the inmates previously described seems year by year to be more minutely adapted to the various grades of defect, bodily and mental, of those under care; and we note with satisfaction the generous tribute accorded to the self-sacrificing women who devote themselves to the improvement of the ofttimes unpromising cases committed to their charge. Methods of teaching feeble children to walk, requiring much motherly patience, are successfully practised, and the habits are sedulously attended to. Some remarkable cases of improvement in these minor though practically very important matters are given in detail. The school arrangements, which the medical director keeps thoroughly in hand, seem well adapted to the feeble intellects under instruction; and we note that special attention is given to the teaching from notes of vocal music. A band is also kept up from amongst the scholars, and has obtained a first prize at a contest at Charenton. "Distractions" are not overlooked, and various visits to theatres, concerts, and exhibitions are recorded. Vaccination or revaccination

is practised on all those admitted to the institution. Visitors are freely admitted to inspect the work on Saturday mornings ; numerous scientific inquirers have availed themselves of this privilege, and in October, 1897, the Bicêtre was honoured with a tour of inspection by the President of the French Republic, who addressed some cheering words to the staff.

The pathological museum at the Bicêtre is probably the most complete in the world of those connected with institutions for abnormal children, and increases in wealth of material year by year. Technical training continues to be given in eight different handicrafts, and the value of the work turned out by the printing office seems to be considerable. On the 1st January, 1897, there were 483 patients in residence at Bicêtre ; there were 63 admissions, 73 discharges, and 17 deaths during the year. At the Fondation Vallée there were 162 girls in residence, with 68 admissions, 27 discharges and transfers, and 19 deaths. The latter seems a high comparative mortality, and we note that six deaths are attributed to pulmonary tubercle, and that the institution had been visited by measles and other infectious ailments. A somewhat amusing disquisition as to the fitness or unfitness for military service of a youth educated as an inmate of the Bicêtre forms part of the report, it being maintained on the one side that to accept such a call would be an "insult to the army," and on the other that the sequestration of a conscript in an asylum is a scandal! In the result it would seem that decision as to the young man in question was deferred for a year. We happen to know of several ex-pupils of English training institutions for imbeciles who are serving with credit in our army, one of them having obtained corporal's stripes!

A series of essays follow on a variety of subjects, such as the treatment of serous diarrhœa by salicylate of lime, epilepsy due to aneurisms, and a contribution to the study of false and true porencephaly. In the view of Bourneville and of Schwartz (who assisted him in this research) true porencephaly depends upon an arrest of development, whilst the condition described as pseudo-porencephaly is always the result of a pathological process. The latter may indeed be congenital, due to a malady of the fœtus, but it may also be produced after birth, sometimes a long while after, as a consequence of encephalitis or hæmorrhagic lesions, and subsequent atrophy. The distinctive characters of true porencephaly are the following :—(1) The cavity has the form of a funnel more or less regular, the base external, the apex towards the ventricle ; its surface is smooth, and uniformly covered by the external pia mater. (2) The arrangement of the convolutions is characteristic, radiating from the bottom of the excavation, which may be said to be the point of convergence. (3) The orifice of communication is always regular, perfectly rounded, and forms what is designated the *porus*. (4) Around the excavation are found other anomalies pointing to arrest of development. The defects and the lesions in each variety are well shown in full-sized plates of the hemispheres of the brains taken from the respective patients, whose cases are fully described in the text. In the line which Bourneville draws between the two varieties he differs essentially from Heschl and other authorities. Epilepsy and the status

epilepticus is dealt with in other essays, and we note that capsules of "bromure de camphre" (Clin's) and mixed bromides seem to be the remedies most in favour at the Bicêtre.

Les Maladies de l'Esprit. Par le Dr. P. Max-Simon. Paris: Librairie, J. B. Baillière et fils. Pp. 319. Price 3 fr. 50.

Th is volume of the *Bibliothèque scientifique contemporaine* is a useful little work on mental diseases addressed to the general public.

The first five chapters are devoted to a study of the alterations ob served in the mind of the insane, and deal successively with hallucinations, illusions, and delusions; then with disorders of feelings, instincts, and conduct. Wherever possible the author has drawn from his own experience to illustrate his remarks, and he refers to some of his personal researches on the nature of hallucinations and the evolution of delusions, &c. Max-Simon claims priority in emphasising the importance of the phenomenon of accidental images as a physiological proof of the nature of hallucinations. "In an hallucination the sense is in a similar state to that which we find in the case of a real perception."

The chapter on delusional insanity, or rather on delusions and their variety, intermittence, alternation, &c., in the various forms of insanity is especially interesting; as is also that which the author devotes to a study of the delusional acts of the insane, and which includes a brief but pithy account of "tics." This quality of pithiness is indeed a characteristic of the book as a whole; so that it can be recommended as an admirable introduction to the study of the insane, for it is also generally sound.

The last two chapters deal with the causes of insanity and its treatment.

Quel doit être le Rôle du Patronage à l'égard des Aliénés? (Patronage Societies for the Insane). Dr. Jules Morel. Vander Haeghen Gand, 1898, pp. 36.

The above is the title of a pamphlet read as a paper by Dr. Morel, Médecin-Directeur of the State Asylum at Mons, at the third International Congress for the consideration of the questions of the care of convicted criminals, abandoned children, and the insane, which was this year held at Antwerp.

After commenting on the increasing and rapid development of public opinion regarding this question, and on the consequent activity of organised work in connection with it, Dr. Morel divides his subject into the following heads:—1. What can be done for the lunatic *before* his removal to an institution? 2. *During* his period of seclusion? 3. The assistance of their families deprived of their support. 4. What ought

to be done for a patient so far recovered that seclusion in an asylum is no longer necessary? 5. The development of public assistance. 6. The special education of children who have inherited tendencies to mental disease. 7. Provision of special asylums for children of defective development and idiots. And 8. Means of diminishing the causes which might predispose to insanity.

Dr. Morel considers that it is the duty of all charitable organisations to extend their patronage to the insane and their families; that suitable members should be set apart for visiting reported cases, and as far as possible for treating those for whom enforced seclusion is deemed unnecessary. In the case where seclusion is absolutely inevitable, the patient ought to be guided and watched over to the very doors of the asylum, and his family protected, helped, and, if need be, supported during the period of absence of the bread-winner out of the funds of the society or societies undertaking such work. Thus, keeping each patient well in sight during his seclusion, the society must be ready to take him by the hand immediately on his release, whether entirely or partially recovered, and to continue its good offices until he is once more able to resume his place as bread-winner and responsible member of the social community.

As necessary side issues of the main question, Dr. Morel advocates the establishment of special asylums for the development and education of those innocent victims of parental weaknesses who are yet capable of moral and mental training, and for the protection and care of such as are too hopelessly sunk in imbecility to need other than the usual bodily attention which their condition demands.

In conclusion, Dr. Morel sketches out a plan for the formation, organisation, and administration of a society having for chief object the duties marked out above, impressing on his readers the growing necessity for such societies in view of the steadily increasing attention given throughout all the countries of Europe to mental disease and its victims.

L'Année psychologique. Publiée par Alfred Binet. Paris: Schleicher frères, 1898, pp. 849, price 15 fr.

This is the fourth volume of Professor Binet's useful year-book of psychology. As usual, half of the volume is devoted to the studies carried on in connection with the Sorbonne Laboratory of Physiological Psychology by M. Binet and his assistants, especially M. Vaschide. We have already pointed out that this is not a method to be commended, and this year there is more need than ever to repeat the observation. The original studies nearly all deal with a series of tests applied to a small number of French school children in order to ascertain their physical and mental characteristics. These papers are interesting and suggestive, and it is a striking proof of Professor Binet's energy and enthusiasm that he should have such a large body of work to present as the result of a single year's exertion, in addition to the labour involved

in editing this year-book. But it cannot be said that any very important or novel results emerge; as Professor Binet himself remarks, these studies are "preliminary and tentative," and it is therefore unreasonable that as much space should be devoted to them as to the summary of the psychological literature of the whole world during 1897.

It is not possible to deal here with the twenty-two papers in which Binet and Vaschide record their experiments on school children. It will be sufficient to mention the subjects or the titles of the more important studies: 'Psychology in Primary Schools,' 'Experiments on Muscular Force,' with dynamometer and ergograph, and accompanied by interesting photographs of the expression of the children during effort; 'Studies on Reaction-time;' 'On Respiration and Circulation, especially during effort;' 'Conclusion of the Physical Tests,' with photographs of the strongest and the weakest boys: this is followed for the sake of comparison by a study of muscular force in the pupils at a normal school, and by further studies dealing with the normal school pupils in the same way as the younger boys had previously been dealt with; 'A Criticism of the Dynamometer;' 'A Criticism of the Ergograph;' 'The Physiology of Muscle in Experiments on Rapidity;' 'Respiratory Effort during Experiments with the Ergograph;' 'The Repair of Muscular Fatigue;' experiments with a new ergograph, called the Spring Ergograph; 'Reaction-time of the Heart, Vaso-motor Nerves, and Blood-pressure;' 'An Hypothesis on the Form of the Capillary Pulse;' 'The Consumption of Bread during the School Year' (showing maxima in April and October, due, the author believes, to the influence of holidays just before these periods; an explanation which is, however, rendered more than doubtful by the fact, which Binet himself demonstrates, that even in prisons there is a similar rise in the consumption of bread in April and October); 'Influence of Prolonged Intellectual Work on Pulse-rate' (slowing the heart and diminishing peripheral capillary circulation). Nearly all these studies are well illustrated by tracings and charts. There is, finally, a memoir by Bourdon summarising the results of recent studies on the visual perception of depth.

It is unnecessary to refer to the summaries of the year's literature (in which some forty pages are devoted to the pathological and abnormal), and to the bibliography, with its 2465 entries, beyond remarking that they are both as admirable as ever, and testify to the indefatigable energy of the editor, who has written the majority of the analytic summaries himself.

Forensic Medicine and Toxicology. By J. Dixon Mann, M.D., F.R.C.P., Professor of Forensic Medicine and Toxicology in Owens College, Manchester, &c. Second edition, revised and enlarged. London: Charles Griffin and Co., 1898. Pp. 683. Price 21*s.*

Professor Mann deals with his subject in three divisions—forensic medicine, insanity, and toxicology. In the part on forensic medicine there is included a concise description of the different forms of legal

procedure in medico-legal cases; the sections on death from the electric current and on life assurance have been rewritten; and new sections have been added on the Obligation of Professional Secrecy, and on Sudden Death from Natural Causes.

In the division on insanity a short description is given of the principal forms of insanity, and in the chapter on the medico-legal relations of insanity the questions of criminal responsibility of the insane, of drunkenness in relation to criminal responsibility, and of testamentary capacity are dealt with at length.

The division on toxicology is particularly full, and contains new sections on blood poisons and on the post-mortem imbibition of poisons, as well as references to some poisons which have not been formerly included in any text-book on the subject.

The treatment of the different subjects is very methodical, sufficiently full, concise, and clear, and the conclusions are stated in an impartial way. The illustrative cases quoted are aptly chosen, and the gradual development of recent views on the medico-legal relationships of insanity and drunkenness is well brought out, while the actual state of the law and its shortcomings in certain directions are clearly indicated. In cases where insanity is urged in bar of responsibility for crime, Professor Mann considers that the plea of insanity should be disposed of before the trial for the crime. The book is provided with a good index, and will prove very useful both for study and for reference.

Guide to the Clinical Examination and Treatment of Sick Children. By John Thomson, M.D., F.R.C.P.Ed. Edinburgh: Clay, 1898. Crown 8vo, pp. 336.

It is much better not to begin the study of disease in children until familiarity with its symptoms in later life has been acquired. In fact, young medical men have scanty opportunities of making themselves acquainted with the ailments of children till they commence practice, and then the majority of their patients are children. Not only their diseases are frequently not the same as those of adults, but the methods of examination are different. Treating sick children is more of an art and less of a science than with adults. Young children cannot assist by detailing their symptoms, and frequently resist examination. Here there is much room for tact and quick insight. Dr. Thomson begins with the action of development, and explains the anatomical and functional differences of the child from the adult; he then proceeds to the methods of examination and the meaning of symptoms. There are few medical practitioners, however skilful, who will not derive valuable hints from the directions which he gives and the precautions which he advises. The work also contains useful recommendations about the dietary and nursery and hygiene of healthy children. His advice about the treatment of children in various diseases is clear and practical, and coming from one so thoroughly versed in the subject can be safely trusted for guidance. Dr. Thomson shows common sense as

well as learning, and while he generally accepts time-honoured maxims, he frequently explains and qualifies them in a useful way. In treatment he possesses the courage which is born of skill and thorough-going diagnosis. He observes of the usual posological table giving the doses at various ages, that these must be modified by the size and strength of the children. He is not afraid to give doses somewhat larger than usual, and recommends bloodletting in cases "where from acute pulmonary or other disease the right side of the heart has become rapidly over-distended, and syncope threatens. Under these circumstances the application of four to six leeches over the sternum may turn the scale in favour of recovery."

To the chapters on the nervous diseases of children we have nothing to object and little to add. The pages on infantile cerebral paralysis are especially good. In the chapter on mental deficiency in early infancy, Dr. Thomson is much ahead of any treatise on children's diseases which we have seen. He has made some original studies upon idiocy in young children, and his paper on this subject in the March number of the *Scottish Medical and Surgical Journal* is the most valuable contribution which has been made by a practising physician. One new feature in the book is the large number of plates, 52 in all; 48 of these are zincographs taken from photographs from actual cases of disease, and illustrate the facies of the malady better than pages of wordy description. Dr. Thomson's style is plain and clear, though sometimes his sentences are rather long and laboured. Altogether the book is of a most useful character, and sure to come into great request. Arrangements have been already made for a translation of the book into Spanish.

On a Method of collecting the Pathological Statistics of the Insane Brain. By Francis O. Simpson, L.R.C.P., M.R.C.S., Pathologist and Assistant Medical Officer, West Riding Asylum, Wakefield. [*The Journal of Pathology and Bacteriology*, May, 1898.]

The essentials of Dr. Simpson's scheme are as follows. Large sheets are employed for the purpose of recording—53¼ inches long by 17¼ inches deep, upon each of which 80 cases can be collected. Each sheet is ruled vertically in 233 columns, 10 to the inch; most of these have headings, there being a few blanks for possible extras. Between each subdivision of the examination scheme and its fellow a red line of demarcation is placed. The sheet is also ruled horizontally, one column for each case (80 columns); each fifth line is red (*i.e.* after each series of five cases). The autopsy over, the pathologist runs over his sheet, placing a stroke in the various columns, according to what he observes. The sheet full, it only remains to add up the columns at the bottom of the page, and to extract the percentages of the various lesions for the different forms of insanity. The scheme is comprehensive. Dr. Simpson hopes that those interested in insanity will adopt something of a similar nature, in order that, by collaboration, a mass of useful information may be collected. Probably asylum pathologists

could not do better than adopt this scheme. We are, however, of opinion that general adhesion is much more likely to be given to a scheme sanctioned by a committee of competent pathologists appointed by an authoritative body to draw up such, than to any individual scheme emanating from a single asylum, however efficient. We cannot forget that individual efforts in this direction have failed before, though meriting, in our view, a better fate.

The appointment of an authoritative committee to draw up a working scheme would in itself be indicative of a dawning desire for collective work in asylums, which, alike in clinical and pathological fields, is a consummation to be wished.

Hysteria as a Psychosis.(1) By Dr. Donald Fraser.

The Presidential Address to the Glasgow Pathological and Clinical Society was devoted to this interesting question. Dr. Fraser makes a very depreciatory statement as to the powers of observation of his fellow-countrymen by asserting his belief that "we do not see many of the typical, and I may say developed forms of the disease, because we do not look for them."

This would seem to imply that these disorders were produced by the act of looking for them; this can scarcely be the case, for many physicians look sedulously without success, and would be greatly pleased to find marked examples of the disorder.

The style of cases so commonly described by French writers would, however, force themselves on the observation of the most inattentive, and surely such observers as Buzzard, Gowers, and many others cannot be so classed.

Speaking of their prominence in France, he uses the phrase "granting their over-development," which seems to imply that their degree of development depends upon the attention of the physician, which would be a strong condemnation of the modes of treatment which produced such developmental results.

Dr. Fraser quotes Sollier, who says "there is not an hysterical disease in the cerebral mechanism which is hysterical;" also the definition of Charcot and Marie in regard to its being a "peculiarly constituted mode of feeling and reaction;" the view of Myers that "hysteria is essentially characterised by an unreasonable auto-suggestion, ... and is a disease of the hypnoid stratum," and speaks of the *rôle* of fixed ideas in the production and maintenance of the hysterical condition.

The author alludes to the alterations of personality described by Binet, and says that the first of Binet's propositions in regard to the development of them is the one we are concerned with as hysteria, viz. that it is to the disaggregation of the consciousness that many of its more striking phenomena are due. This, he says, is a "condition which permits the memories lost to the eye, though still subsisting in the subliminal consciousness, to assert themselves in bodily manifesta-

tions." An important factor in this, he asserts, is the fixed idea, often depending on shock, &c. The memory, too, is essentially affected.

The author quotes at length cases illustrative of these views, and concludes his instructive and suggestive paper by the statement that, while considering hysteria as a psychosis, he accepts Janet's (2) views as a working hypothesis.

(1) *Glasgow Medical Journal*, December, 1897. (2) État mental des hystériques; les stigmates mentaux.

Part III.—Psychological Retrospect.

FRENCH RETROSPECT.

By Dr. Macevoy.

The Self-immured (*voluntary entombment*).—Under this heading in *Revue Scientifique* (1898, No. 10) M. Michel Delines resumes a study of social psycho-pathology which Prof. Sikorski, of Kieff, has published in *Questions de médecine névro-psychique* concerning an epidemic of suicide which took place at Ternovo, in Southern Russia. Most of the details were obtained from the sole survivor of this tragedy, one Feodor Kovalev, who helped his co-religionists to bury themselves alive.

The Kovalev family, belonging to the old Russian faith, owned some property at Ternovo, where they extended hospitality to their fellow-sectarians, so that in time a kind of convent (*skit*) was established, where men and women led an ascetic life. Two individuals were predominant in the establishment, Mme. Kovalev, Feodor's mother, and a certain woman called Vitalie,—the former a good, industrious, sweet woman; the latter a spinster of thirty-five years, full of energy and decision. Vitalie very soon became the leading spirit of the convent; she administered the place and superintended everything (said mass, preached, laid down laws, &c.), although she made show of consulting Mother Kovalev. To a certain Pauline the younger, another inmate, Sikorski believes, however, must be assigned an important share in the elaboration of plans, and the psychological preparation for the terrible events which occurred at Ternovo, for Vitalie never decided upon anything before consulting her. Vitalie fasted, prayed, and read out from the old church works, but she knew very little concerning every-day occurrences as related in newspapers and modern works. Pauline, on the contrary, was more up-to-date, commented upon the events of the day, and stimulated the zeal of her companion.

In the autumn of 1896 Vitalie and Pauline began to talk of persecutions which they foresaw against their sect; they told their companions that they were to be sent to Siberia or imprisoned. The habitual feelings of the inmates of the convent—exasperation, suspicion, and cause-

less apprehensions—became more and more manifest in Vitalie, and she succeeded in deeply impressing the women and children of the Kovalev family. September and October appear to have been spent in a state of anxiety and fear by the members of the *skit;* all were expecting deportation or reclusion. They abandoned their ordinary occupations; some provided themselves with a supply of warm clothing in case of exile; others sold their worldly goods, preparing for death; nights were spent in prayer, &c.; in short, life became intolerable to them, and when one of the young inmates exclaimed one day, "Let us bury ourselves alive," the suggestion was eagerly adopted as an alternative to the torture and mutilation which they anticipated in prison.

The announcement of a general census throughout the Russian Empire precipitated matters, and may be called the exciting cause of this collective suicide, which Prof. Sikorski looks upon as an explosion of atavism; for the events which took place at Ternovo recall vividly the collective suicides by fire, water, and burial which were common in Russia at the end of the seventeenth century and during the eighteenth. The document which was handed over to the census-takers when they knocked at the door of the *skit* is identical with those which we find were written by the Sectarians of 1723 and 1736 prior to immuring themselves.

Death by starvation was first entertained; but the fear that their children might survive them and be baptised in the orthodox faith led to the decision of burial. Vitalie was the prime mover in the preparations for the entombment; she quoted scriptures in favour of this resolution, told the community that Antichrist had descended, that the end of the world was due in two or three days, &c.; she even sent for her own sister and persuaded her to give a good example by taking the lead and burying herself first.

Four groups were successively buried. The first group consisted of nine persons, and included Kovalev's wife and two children, Vitalie's sister, and Pauline's father. The grave—four metres long, four metres in breadth, and equal in depth to the height of a man—was dug in a cave near the house of Fomine, at which the victims spent the night of December 23rd in prayer and singing hymns, &c. They proceeded to the tomb enshrouded, holding lighted tapers, and singing a funereal mass; the condition of religious ecstasy into which the victims had worked themselves seems to have taken away from the minds of Kovalev, Vitalie, and others who accompanied them all idea of the torture which they were about to undergo. Kovalev by command of Vitalie closed the grave after the last victim had descended.

Among many of the details which were observed a few months later (April, 1897), when the grave was opened, it is interesting to note that no scratches or bruises were found on the bodies of the victims, such as are usually described in the case of persons buried alive; but an agonising death undoubtedly took place from asphyxia, probably in from one and a half to eight hours.

Four days later a second group, consisting of six victims, were entombed; among them was a hardened drunkard, Mateï Soukhov, who seems to have been induced to join them while in a state of apathy

following upon a drinking bout. Kovalev, who again sealed the tomb, only at the last moment informed them of the fate of the first group.

On the 5th of February, 1897, Vitalie and six other persons were arrested by the police authorities for refusing to answer to the questions of the census officials; but owing to their refusal to take food, they were allowed to return to the convent after five days—the convent being guarded.

Shortly after this a third group, consisting of four women, one of whom was Kovalev's sister, were buried. Kovalev buried them in a grave which he dug one kilometre away from his house; the victims were placed side by side, and he gradually covered them with earth, beginning with the legs, and finally flattening the earth over the bodies by treading upon it by command of Vitalie, who was the only other spectator of this gruesome tragedy. Death no doubt took place rapidly in this case; for when the bodies were unearthed later on, their eyes were found wide open, their tongues protruding, and the faces agonised.

The last group, consisting of six persons, included Vitalie herself, Kovalev's mother, Pauline the younger, and Dmitri, an idiot brother of Kovalev. Kovalev's mother, who was strongly averse to suicide, was finally prompted to take the fatal step on hearing her idiot son Dmitri exclaim one day as if inspired, "Mother, why do you hesitate? Spit upon what you leave here below; but there, above, you will be happy." Vitalie was also impressed by these words, but she seems to have joined the last group more from a feeling of fear that justice would later on fasten the responsibility of the previous suicides upon her, than from a conviction that her death was necessary to expiate her faults and qualify her for an eternal reward.

Feodor Kovalev and his brother Dmitri dug the grave, and the former as on the other occasions sealed it, his last promise to Vitalie being that he would not long survive them.

The last part of the article is taken up with an analysis of the character of Feodor Kovalev, who, whatever may have been his share in instigating these collective suicides, was the principal agent in carrying them out. Sikorski argues in detail, if unconvincingly, that he was a mere tool in the hands of Vitalie, but that his moral deliverance took place after her death. A careful examination of certain characteristics in the expression and facial stigmata of Kovalev leads him to conclude that there was a marked difference in their appearance just before his arrest (*i. e.* at the time of the crime) and two months after.

Under the influence of Vitalie, Kovalev would seem to have suffered from abolition of will, paralysis of energy and even feeling, although he was of fair development on the affective side. With time a feeling of remorse seems to penetrate into this callous nature, and he bemoans the absence of any one sensible person in the skit: "Why was there no one there to enlighten us?" "It is impossible," says Sikorski, "not to feel immense pity for this man, who now without ceasing questions those around him to clear up the mist which obscures his mind."

Such collective suicides as those of Ternovo are not rare in the history of the Russian people, and Sapojnikov, in an interesting work,

mentions numerous examples which have occurred in the seventeenth, eighteenth, and nineteenth centuries. In most of them the instigators have taken no part in the suicides, but have been prime movers in the preparations. A process of psychological selection paves the way, so that communities of this kind in time come to consist (by gradual elimination of those who offer any resistance to morbid ideas) of degenerates, pessimists, psychically morbid individuals, &c., whom some enthusiast easily fires into the belief that suicide is a short road to eternal happiness. That collective suicide is almost confined to Russia is explained by the absence of treatment of the insane; one twentieth of them only, it appears, are under care in asylums, so it is easy to see how the remainder give a stamp of madness to the collective acts which occur during social crises.

Unquestionably, among the sectarians of Ternovo there were confirmed lunatics; and besides the fear of the census, which was considered to be the work of Antichrist, the inmates of the skit were told, among other things, by Vitalie that in dying they would found a place of pilgrimage rich in relics, where thousands would come, as at Tchernigov (where the miraculous relics of St. Theodosius had just been discovered), to worship. Kovalev, says Professor Sikorski, was so imbued with this idea, that when the remains of the immured were unearthed in his presence he manifested much exultation, and expected that miracles would follow.

A study of this epidemic of suicides is in many respects of great interest, and is a further contribution to a subject which has received a good deal of attention of late years—the psychology of crowds.

Criminal Lunatics.—Dr. Henri Colin, of Gaillon Asylum, urged at the meeting of the Société Générale des Prisons the construction of a special State asylum for the treatment of criminal lunatics (see *Revue de Psychiatrie*, 1898, No. 3). The generally received opinion at the present day is that criminal lunatics are a special class of individuals, differing from ordinary criminals and from the ordinary insane of our asylums, and therefore requiring special care. With regard to the difference which has been suggested between criminal lunatics and insane criminals, there appears to be no reason to apply different treatment to them. Prison treatment Colin does not consider a factor in the ætiology of insanity; insane criminals are either lunatics unrecognised, or individuals strongly predisposed to insanity by a morbid heredity. Three cases, among a number of others observed by the author, are given of insane criminals who were really unrecognised lunatics when sentenced. Motet has laid great stress on this.

At present in France the treatment of criminal lunatics is unsatisfactory. Two cases may occur; either the individual is declared irresponsible during the trial, or the insanity manifests itself (or is recognised) after he is sentenced. In the first case the individual is discharged, or is sent to an ordinary asylum, whence he is soon discharged to begin over again. In the second case he cannot be kept in prison, and is sent to an ordinary asylum, or to the special quarter at Gaillon for insane criminals. The inmates here complete their term of imprisonment, at the end of which time, if still ill, they are sent to an

asylum; if well, they are discharged, although, as Colin observes, there may be ten chances to one that there will be a recurrence. A few cases out of a number in his experience are quoted to show this. It is obvious that society is not well protected under this system. What is wanted is a special asylum, placed under the immediate control of the State, especially independent of the local influence of county councils, &c.; for the author mentions instances of ordinary lunatics who are left at large so as not to swell the rates of the district, and he pertinently asks what will happen in the case of criminal ones. The construction of special quarters for these cases in the different asylums presents many obvious disadvantages. A central asylum, like our own Broadmoor, is therefore what Dr. Colin urges; and to prevent overcrowding he advises the adoption of the practice followed there,—dements, general paralytics, and incurable lunatics who have become harmless can be drafted on to ordinary asylums. Moreover conditional discharge, he believes, is a useful procedure.

In conclusion, he also hopes to see Dr. Motet's suggestion carried out—that there should be in all large prisons a special observation quarter for the reception of doubtful insane criminals. Only under these circumstances can proper expert reports be made; the prisoners simulating insanity can then be carefully examined, being submitted to skilled continuous observation.

Atrophy of the Optic Nerve in relation to General Paralysis and Tabes.—Dr. M. Klippel (*Revue de Psychiatrie*, 1898, No. 4) endeavours to show that a consideration of the different reaction of the optic nerve in the two diseases tabes and general paralysis throws light on their different pathogeny.

Grey degeneration or grey atrophy of the optic nerve leading to blindness is fairly frequent in tabes, but absent in general paralysis. Why this difference? The explanation is that in tabes the more peripheral neurons are affected, in general paralysis the more central ones.

If occasionally the central neurons are affected in tabes (*e.g.* tabetic dementia) it is only secondarily, late in the disease, and with difficulty; and in the same way it is infrequent to find general paralysis reacting upon the peripheral neurons.

If we take the retina, we find that it contains certain nerve-cells, with prolongations constituting the optic teleneuron. On the one hand these protoplasmic prolongations are related to cells which transmit to them the luminous impressions. The impression reaches the centre of the cell, hence it travels in the cylindrical prolongation, where fresh neurons intervene. The luminous impression is carried by them to the ganglia at the base of the brain, where it is again taken up by a third kind of neuron in contact with those of the periphery.

In tabes the two optic teleneurons are affected. What do these peripheral neurons of vision represent in the domain of general sensation? Certain cells of the retina are the homologues of the cells of the spinal ganglia; the retina is in part an intervertebral ganglion projected to the periphery. So that grey degeneration of the retina is nothing else but grey degeneration of the peripheral teleneurons. This is not

merely an enticing hypothesis; for let us recall in this connection that in some animals the spinal ganglia, placed at the level of the external tegument, are in the same position as the retina in man: moreover in man, too, the centre of the gustatory teleneuron is already far apart from the bulbar origin of the glosso-pharyngeal nerve; and that, still more important, the olfactory teleneuron is none other than the olfactory cell seated in the pituitary membrane, the olfactory nerve itself representing nothing more than a posterior spinal nerve-root. Well, tabes is precisely a disease which affects all or part of the system of the sensory teleneurons, both those of general sensation and those of special sensation. The localisation of tabes is, therefore, in the peripheral neurons.

Now if we consider general paralysis, we find that it is the central neurons which are affected; these occupy in the nerve-centres and in the spinal cord different sites from those of the teleneurons which are prolonged into them. It is for this reason that the posterior roots, and especially that which the retinal system represents (an integral part of the neurons in which tabes is localised), are not affected or only very slightly by general paralysis; in any case that they can only be affected by reason of what Klippel calls "the degeneration of transmission," and not through a primary and intense localisation in them.

To resume, the presence of grey degeneration of the optic nerve leading to blindness in tabes, and its absence in general paralysis, seem to enable us to establish the respective distribution of the lesions in these two diseases, if we take care to deduce the general considerations which are related thereto. Probably no neuron of sensation is more strikingly affected in the one disease (tabes); none more clearly spared in the other.

A Case of Juvenile General Paralysis beginning in the Spinal Cord.—Professor Joffroy *à propos* of a case of juvenile general paralysis, makes some important remarks on this affection (*s. Revue de Psychiatrie*, 1898, No. 6). Female, æt. 23, was shown to his class at St. Anne Asylum, after having been ill two years, in a helpless condition, unable to walk or stand up, with violent tremors, marked affection of speech, inequality of pupils and Argyll Robertson phenomenon, demented, and having lost control over bladder and rectum. In addition there was marked general anæsthesia and slow reflexes, suggesting the idea of a medullary lesion.

In this connection he recalls a case of a youth æt. 19 years, who, after being ill on and off for four years, went under Charcot at the Salpêtrière with paraplegia, leading to a diagnosis of "organic lesion of the spinal cord." Under a treatment with ergot and the actual cautery the paraplegia disappeared. Later on there appeared anæsthesia of the face and arms, and siftiophobia, which suggested hysteria. Whereupon there rapidly appeared weakness of legs, emaciation, affection of speech, tremors of lips, unequal and inactive pupils, wet and dirty habits, &c., and early death, with post-mortem evidences of general paralysis. "These famous cases of tabes ending in general paralysis," says Joffroy, "are really cases of general paralysis beginning with lesions of the spinal cord," *i. e.* pathologically and often clinically distinct from true tabes.

Looking over the records of twenty-two cases of juvenile general paralysis (Clousten, Turnbull, Régis, Wiglesworth, Ballet, Charcot and Dutil, Legrain, &c.), after reviewing some of the important clinical aspects of these cases, predominance of physical signs and of emaciation, rarity of megalomania, disorders of sensation, &c., the ætiology, especially to Joffroy, is a question of great interest. Puberty appears to be the common period of invasion (average age of onset fifteen and a half years for males, fourteen and a half for females) in these juvenile cases, but the most potent factor is *heredity*. In seventeen out of the twenty-two cases referred to above, one finds marked nervous disorder in the family (insanity, nervous diseases, or neuroses). Joffroy examines the much debated *rôle* which alcohol and syphilis in the generators are said to play in the causation of this disease; he much doubts whether the child of a syphilitic parent is necessarily tainted, and shows how important it is to discriminate in talking of congenital or inherited syphilis. Alcohol, on the other hand, he believes to be a powerful ætiological factor in this disease.

The Toxicity of Sweat in Epileptics and Melancholiacs.—Mavrojannis has made observations on the character of the sweat in epileptics and melancholiacs, among patients under the care of Dr. Toulouse, which do not at all agree with the conclusions of Cabitto of Geneva (*Revue de Psychiatrie*, 1898, No. 7).

In the case of epileptics the patients were females, and the urine first passed after each attack was carefully examined as well as the sweat. Like other observers, he finds that the toxicity of the urine is nearly always below the normal.

Experiment 1.—L—, 32 years. 20 c.c. of sweat collected half an hour after a strong attack. Injected into the veins of a rabbit: slight depression and some aching of the back; no symptoms one hour later.

Experiment 2.—J—, 27 years. 45 c.c. of sweat collected in forty-five minutes after an attack. Injection into a rabbit causes temporary depression and a few movements of forced extension of the spine, &c.

The conclusions from six similar experiments are that the sweat of epileptics immediately after fits is not highly toxic; Cabitto says it is; but injected in rabbits it produces, as a characteristic symptom, movements of forced extension of the spine not observed in the case of normal sweat.

With regard to melancholiacs, while one is prepared *a priori* to find that all the excretions are more toxic than normally, as has been often proved in the case of the urine, Mavrojannis concludes from his observations that such is not the case with the sweat.

The Endeavour to Live and the Theory of Final Causes.—Professor Charles Richet, in *Revue Scientifique*, 1898, No. 1, returns again to the question of final causes, and in an interesting article endeavours to prove that in the case of living beings, in addition to the existence of the law of the struggle for life, we must admit also that of the endeavour to live as a final cause.

It is easy, he says, to turn the theory of final causes into ridicule. The nose, said Voltaire, is made to carry spectacles, and unquestionably many of the dicta of "finalists" have justly been the

source of much amusement. Galen was never at a loss to find a cause for all that he observed in anatomy; "If the air were denser, we should be unable to walk," said Fénelon, &c.; small wonder, then, that even great minds have considered it a superstition unworthy of being considered in any scientific philosophy. But while it must be admitted that our ignorance of the world is profound, and our intellect singularly imperfect, so that we can never grasp the *why* of the natural laws which govern matter, or the cause of the world in its immensity, yet it may be possible for us to draw conclusions concerning certain of its parts.

We cannot, for example, resist saying that the eye is constructed to see, the heart to drive the blood, &c. Physiology and anatomy show us an extraordinary complexity in the play of parts of our frame. The physiologist must conclude that the reflex cough excited by the inhalation of a foreign body into the larynx has a final cause—the expulsion of the foreign body. And so impressed are we with the truth that the various parts of the animal mechanism have their use, that we obstinately try to discover the function of each organ: because we ignore the true function of the spleen, we never think of concluding that the spleen is useless; but we go on seeking, convinced from our general experience in other directions that sooner or later we shall discover it. Nature has not made useless organs; everything has a goal.

Zoologists are also finalists; books upon books have been published upon the various means of defence among animals; but what is the dominant idea that arises in the mind when we discover that the octopus emits an ink-like fluid when surprised by an enemy; or that the crab parts with a section of its claw when held by it? Simply that the various functions of defence have for their end the safeguard of the organism attacked.

But in the search for final causes detail alone is not sufficient. Have living beings as a whole great general functions adapted to an end? Take that of reproduction. If we do not accept the hypothesis that Nature intends the perpetuity of the species, and that she has taken a host of ways of insuring it, we understand nothing; but all is clear to us if we admit that Nature has an aim, which is to insure life to the species.

Fear, vertigo, pain, &c., Prof. Richet shows are useful and necessary to the life of the individual (see in this connection "Biological Study of Pain," *Revue Scientifique*, August 22nd, 1896, abstracted in *Journal of Mental Science*, vol. xliii, p. 408), so that the feelings and sensations of living beings are, like the structure and functions of their organs, related to the conservation of the individual and the conservation of the species.

A general conclusion forces itself upon the mind that living beings are organised to live, a conclusion which is admirably in accordance with the hypothesis of natural selection.

To establish the truth that beings tend to live, that the endeavour to live is a final cause, is possible, but we cannot go beyond and say why there is life. To eliminate everything hypothetical Richet suggests

that the law should be thus stated: "Everything occurs as if Nature desired life;" and this proposition he considers unassailable.

Treatment of Insanity by Rest in Bed.—Dr. Keraval (*Le Progrès Médical*, 1898, No. 25) gives an interesting review of the progress which the question of the treatment of the insane by rest in bed has made during the last few years in various countries.

It is interesting to note the variability in the views held by different physicians as to the kind of cases which seem to be benefited by this treatment, and the length of time during which recent cases should be kept in bed.

The evolution of this mode of treatment extends practically over the last fifteen years, and it is quite evident that for a due appreciation of its potency for good, account must be taken of the circumstances under which it is carried out and has been carried out in various asylums. The construction of the asylum and the means at its disposal (number of attendants, mode of supervision, &c.) are most important factors in this connection. It is obvious that one cannot compare the results of treatment of recent cases of melancholia kept in a common dormitory within close access of other wards with the results of treatment of similar cases kept in bed in well-isolated separate rooms.

In the present state of our knowledge, based on the observations of German, French, English, Russian, &c., alienists, one can only say that this mode of treatment is on its trial. It is difficult to conclude as yet that even one certain class of mental cases is likely to improve under it, and unfortunately there stands strikingly in the way of extensive trials of the method the question of expense.

The Present Increase of Nervous Disorders.—The *Revue Scientifique*, (1898, No. 14) contains an address given by Erb to the University of Heidelberg on the increasing prevalence of nervous disorders. After enumerating the numerous factors which especially during the present century have contributed to upset the nervous system of man (wars, revolutions, discoveries, &c., political and social events of all kinds), Erb tries to define that vague condition which we call *nervousness*, a kind of transition between health and disease, and very often the most propitious soil for the development of the latter. To the idea of nervousness we connect all that denotes an acute excitability of the nervous system; precipitation and a certain disturbance in movements and work, excessive sensitiveness, tendency to fright, irritability accompanied with depression, an enfeebled resistance to the small disappointments of life ("to the malignancy of the object" [Vischer]), a changeable disposition, disturbed sleep, depression after each laborious effort, excitability of the heart and the vascular system, &c. While he believes that there is now-a-days a progressive increase in organic diseases of the nervous system, general paralysis, tabes, apoplexy, myelitis, &c.; and an enfeebled capacity of resistance against the noxious elements which especially affect the nervous system (poisons such as alcohol, lead, arsenic; infections such as diphtheria, influenza, syphilis, &c., traumatism, &c. &c.), it is especially to the increase of functional neuroses that he draws attention,—an increase particularly convincing as regards hysteria, hypochondriasis, and neurasthenia.

Neurasthenia is predominant to-day; it is the most frequent and the most important of the neuroses, and when one speaks of the great frequency of "nervousness" as a special disease, it is neurasthenia one has in one's mind. Reviewing the history of this disease in the past, with the probable extent of its incidence, Erb believes that the experience of medical men during the last ten years, say, is unanimous that it is on the increase, and greatly so.

What are the causes of this increase? This is the next point which Erb inquires into, and his formidable list arranged under eight headings is a severe indictment against the age in which we live. The conditions of life at the present day all predispose to this affection.

With regard to the future, he sees rays of hope. The hygiene of the nervous system is still in its infancy, but it will grow; in dealing with the prophylaxis of nervousness, some of the evil effects associated with the progress of civilisation we cannot hope to eliminate; but in the direction of the physical and intellectual care of children in their early age, and later when at school, much improvement will be made. (An "association for the hygienic education of youth" has just been started in Berlin.) With the growth of knowledge, professional hygiene will be more carefully studied. Society itself can do much, and it is especially gratifying to find that the fight against alcoholism, the adoption of Sunday as a day of rest, the limitation of hours of labour, &c., are becoming more wide-spread. That a good deal more can be easily done, a glance at some practical suggestions made by Erb in this address will show.

Embodying as it does the opinions and suggestions of an eminent authority on nervous diseases, this is an address which should be widely read.

Amœboidism of Nerve-cells; Histological Theory of Sleep; Nervi Nervorum.—In *Revue Scientifique*, 1898, No. 11, is a reprint of the lecture delivered by Professor Mathias-Duval at the close of his course on histology at the Académie de Médecine. When, with the researches of Cajal, Kölliker, Retzius, &c., we were led to adopt the view of contiguity of the ramifications of the neurons, as against the view of continuity entertained by Gerlach, it was natural to inquire whether these protoplasmic ramifications are susceptible of approaching to, or receding from, one another in virtue of their contractile property. This is essentially the hypothesis of nervous amœboidism. Already in 1890 Rabl-Rückhardt suggested that these movements might account for differences in the functional states of nervous areæ, and in 1894 we find Lépine suggesting that possibly sleep might be due to the retraction of cellular prolongations leading to their isolation from one another. In 1895 Mathias Duval himself, in a communication to the Société de Biologie, insists on the phenomena presented by olfactory cells, which are now generally admitted to be nerve-cells, the peripheral prolongation of which (the homologue of the protoplasmic ramifications of the neuron) is capable of movement—"We may therefore conceive that the imagination, the memory, the association of ideas, become more active under the influence of certain agents (tea, coffee) whose function would be to excite amœboid movements in the contiguous extremities of

nerve-cells, causing the ramifications to approach each other, and facilitating the passage of impulses." This communication stimulated research, so that to-day the anatomical proof of this hypothesis is forthcoming. The theses of two of Mathias-Duval's pupils, Messrs. Pupin and Deyber, are of much importance in this connection, and still more recently Professor Mathias Duval draws attention to the convincing observations of Manouélian carried on in his own laboratory.

A comparative study of sleep with the waking state leads to interesting speculations, to which may easily be adapted the theory of nervous amœboidism; in sleep some interruption to the passage of nervous stimuli occurs at the level of articulation of the peripheral sensory neuron with the central sensory neuron, and at the level of articulation of the latter with the psychic neuron (pyramidal cells). To less intimate contiguity of cells this interruption must be due. How does this arise? We can only suppose that the cellular ramifications become further apart by a slight retraction towards the body of the cell, or by undergoing some lateral displacement. Experimental data favour the first view; Manouélian's observations on tired animals show that the fatigue of nervous elements brings about the isolation, the retraction of cellular prolongations.

The earliest anatomical researches upon the amœboid movements of cells were carried on upon cells very nearly related to nervous cells; retinal cells, olfactory cells, &c., and the discovery of the existence of movements in these affords what Mathias-Duval calls "proofs by analogy" of the existence of similar movements in true nerve-cells.

Pergen's recent experiments upon fishes (*Leuciscus rutilus*) confirm those of Kühne, Angelucci, &c. A comparison of sections of the retina from the eyes of one group of fishes kept in complete darkness for forty-eight hours, with those from another group exposed to light, is most conclusive. In the former we find retracted pigment-cells, with short, sparsely pigmented pseudopoda; in the latter the pseudopoda are long, project deeply between the cells of Jacob's membrane, and are charged with pigment.

A study of the olfactory cells, which are now looked upon as true neurons—bipolar cells, homologous and similar to the bipolar cells of spinal ganglia—also confirms the theory of nervous amœboidism; for Ranvier and others have well shown that there are characteristic movements, different to those of ordinary vibratory cilia, to be seen in the living olfactory cilia of frogs.

Direct observations on the pyramidal cells of animals are for the first time demonstrative of the "amœboidism" theory in the experiments of Demoor and of Stefanowska; Demoor observes a moniliform appearance in the prolongation of cells in animals morphinised, and their retraction towards the body of the cell. Stefanowska's observations extend especially to the morphology of the spines or spinous processes of the dendrites ("Swedish ladder" appearance, so-called happily by Demoor), for which she suggests the appellation of "pyriform appendices," owing to their characteristic form. It is, according to her, through the medium of these pyriform appendices that is effected the contact between the prolongations of cerebral neurons, and as they

may according to circumstances project from, or retract into, the dendrites, we find an anatomical proof of the existence of pseudopoda foreseen in the ingenious theories of Mathias-Duval, Lépine, and Rabl-Rückhardt.

The more recent researches of Manouélian entirely confirm these observations. It might have been objected to the experiments of Demoor and others that the employment of morphia, of electricity, &c., introduced sources of error. Manouélian brings about fatigue in mice by persistent stimulation (teasing them, &c.), and compares their cerebral cells with those of ordinary mice. The rapid method of Golgi-Cajal is that which he generally uses for his preparations, and the pyramidal cells and the mitral cells of the olfactory bulb are especially studied. Among other conclusions he finds that "the spines of the ramifications of the dendrites (in pyramidal cells) disappear in the case of the fatigued mouse, while spherical thickenings occur here and there in their length, more especially towards their extremities,"—a confirmation of Stefanowska's observations.

The existence of amœboid movements in nerve-cells being demonstrated, a question which has puzzled even the most confirmed supporters of the theory is to explain why and how the arborisations can be incited to approach or separate from one another. Cajal suggests the existence of amœboidism in the neuroglia cells; Mathias-Duval and Manouélian suggest the theory of nervi nervorum, *i. e.* centrifugal nerve-fibres presiding over the protoplasmic movements of the ramifications of nerve-cells; a theory analogous to that of vaso-dilatation and vaso-constriction, &c. The anatomical proof of this theory is borne out by the observations of Ramon y Cajal in the case of the retina, and by those of Manouélian for the olfactory bulb. Manouélian's preparations, says our author, "afford an irrefutable demonstration of the existence of the centrifugal nervous fibres, and of their termination at the level of articulation of the cylindraxil prolongations of the peripheral olfactory neurons with the protoplasmic prolongations of the central olfactory neurons." For these nervous fibres presiding over the amœboid activity of the neurons, the name *nervi nervorum* is proposed. Sappey gave this name to the nervous ramifications which he discovered in the interfascicular connective tissue of nerve-trunks; but Sappey's nervi nervorum are in reality vaso-motor nerves to the vessels of these nerve-trunks. Mathias-Duval's nervi nervorum, on the contrary, are related to the nerve-cell in the same way as the motor plates are to the muscle-cells. In conclusion, Mathias-Duval says that whatever may be the ultimate fate of this theory, the communications of Cajal and Soukhanoff may perhaps be said to have first embodied it; "but of quite secondary importance it is for him to see his own name attached to the emission of a new idea; the essential is that the idea should spread and succeed."

Amœboidism of Nerve-cells.—The ingenious and suggestive views concerning the amœboid movements of nerve-cells to which we have referred in an abstract of Professor Mathias-Duval's lecture, have recently been confirmed in the case of the spinal cord by Robert Odier of Geneva (*vide Revue Scientifique*, 1898, No. 22). The researches are

confined to a monograph published at Geneva (Georg et Cie.) "Mouvements de la cellule nerveuse de la moelle épinière." Sections of the spinal cord from active animals and from animals at rest when compared with each other exhibit certain important differences in the appearance of the cells; so that their extremities are extended at rest, and retracted during activity. This retraction of pseudopoda is well seen when the spinal cord is artificially stimulated. It would appear that with an electric stimulus, the retraction of dendrites takes place in the direction of the current, and only the prolongations parallel to it are affected. Odier finds, like other observers, that this retraction may affect the body of the cell and even the nucleus later on. With prolonged stimulation important alterations take place in the chromophile part of the cell; instead of the regular distribution observed while the cell is at rest, we find a disposition in asymmetrical masses; the behaviour to staining varies. With an exhausted spinal cord, one notices successively, retraction of cellular prolongations, reduction in the chromophile elements, retraction of the body of the cell, then of the nucleus, and finally of the nucleolus. In the nucleus itself the chromatic elements are the most sensitive, as has been generally held. These observations seem to show that anatomical and chemical alterations in the nerve-cells arise from fatigue, although it is not clear that some of these changes are not pathological.

Case of Acromegaly with Dementia.—Professor Joffroy (*Le Progrès Médical*, 1898, No. 9) gives the notes of a case of acromegaly, upon which he bases an interesting clinical lecture, occurring in a woman who had been under his care for some years. The early manifestations of the disease were noticed at the age of fifty-three or fifty-four years, and when shown to his pupils on her admission at Sainte-Anne four years later, she was a typical case of the condition: characteristic physiognomy, with large nose, prominent superciliary ridges, maxillary prognathism, enlarged tongue and lower lip, and there was marked affection of the hands, feet, clavicles, &c. Her height was normal and stationary, as is usually observed in cases occurring after the menopause, in contra-distinction to the marked increase in height, amounting frequently to gigantism, which occurs in younger patients, *i. e.* during the reproductive period.

In addition to the classical symptoms of acromegaly, Joffroy's case was complicated with cardiac disease (aortic obstruction and incompetence, with hypertrophied left ventricle).

The psychical symptoms in the case were more marked than usual, which led to her admission to the asylum; her memory was considerably diminished; she could not remember the date of the month or the day of the week, and she forgot from one moment to the other what was said to her or what she was obliged to do in her work, so that she could do no shopping or prepare her food. She was indifferent, apathetic, and often helpless.

The author discusses the pathogeny of acromegaly, reviews the various theories brought forward, draws attention to its analogy with Graves's disease, and inclines to P. Marie's view that acromegaly is due to a lesion of the pituitary body. Gigantism he considers to be the same disease as acromegaly, only occurring before adult life, that is

during the period of growth. Treatment of various kinds and with various drugs was of no avail in his case, and Joffroy believes that so far we are not in possession of any useful remedy for acromegaly.

Epilepsy consecutive to Typhoid Fever.—The relation of nervous diseases to the infectious diseases in general and to typhoid in particular is an important one, and the notes of this case reported by Bourneville and Dardel (*Le Progrès Médical*, 1898, No. 12) are of interest in this connection. A child of good family history was bright and intelligent up to the age of three years, when he was seized with a sharp attack of typhoid fever (which at the same time carried off his mother, one of his brothers, and one of his sisters), with nervous complications. Two months after this illness, which left him very weak, he was suddenly attacked with epileptic convulsions, and became henceforth a confirmed epileptic subject, at first to weekly attacks and then to more frequent ones. His intellectual faculties became more and more dimmed, especially between the age of nine and eleven years, when he was admitted as an idiot under the care of Dr. Bourneville. Progressive bodily and mental enfeeblement occurred, and he finally died a year later from a recurrent attack of enteritis not due to any macroscopic lesion of the bowel, possibly nervous in origin. At the post-mortem examination, details of which are fully given, the most marked features were an arrest of development of the frontal lobes, sclerosis of the occipital lobes, and a remarkable asymmetry of the cerebral convolutions on both the convex and internal aspects of the two cerebral hemispheres. (Figures of these are shown.)

Chronic Alcoholism.—In *Revue Scientifique* (1898, No. 3) Professor Joffroy's lecture delivered at the Sainte-Anne Asylum on the etiology of alcoholism, and the result of certain experimental researches on the action of alcohol, will be found. It is important to remember that chronic alcoholism in nearly all its symptoms differs considerably from acute alcoholism, and that what we call alcoholic intoxication is a complex condition arising from the introduction into the blood of a very variable toxic mixture in which ethyl alcohol holds the first place. Moreover, a most variable factor in the question is the individuality upon which the various alcoholic beverages act, modified, of course, by inherited or acquired tendencies; hence the differing preponderance in various cases of lesions of the stomach, liver, lungs, kidneys, &c. These preliminary considerations, among others, suffice to show the colossal nature of a truly scientific study of alcoholism.

Professor Joffroy here communicates the results of one method of throwing light on this question—the experimental; ethyl alcohol, methyl alcohol, aldehyde and furfurol were the four ingredients of certain alcoholic beverages first selected, and they were administered daily to dogs over certain periods of time—not, one might add, without difficulty, for several subjects of these experiments absolutely refused their alcoholised food after a short while. With certain variations dependent upon the individuality of the animal experimented upon, the results support, more or less, those of other observers; ethyl alcohol is toxic, it determines modifications of character, paralytic phenomena, lesions of the stomach and bowel, of the liver, and occasionally of the

kidneys; finally, even with a small dose of alcohol, death may supervene fairly quickly. That the presence of salts of potash, as in wine, may aggravate the toxic effects of this beverage, as the experiments of Lancereaux seem to show, is not denied. Methyl alcohol, according to Joffroy's experiments, acts much in the same way as ethyl alcohol.

In the case of *aldehyde*, lesions of the digestive tract, and profound modifications of the urinary function, speedily fatal, were especially marked.

The difference between chronic and acute intoxication is well exemplified in the case of furfurol; while in the latter it is very active, it appears to produce very little effect in chronic intoxication. In a dog to whom it was given in fairly strong doses daily for twenty months, the only result was some appearance of senility; no other psychical or physical disturbance was noted.

Entertainments in the Treatment of the Insane.—Dr. Naecke, of Hubertusburg Asylum (*Revue de Psychiatrie*, 1897, No. 10), is sceptical of the curative power of music, theatrical performances, &c., in insanity, but speaks strongly in favour of entertainments and diversions of all kinds as aids to treatment in the majority of cases. It is important, however, to exercise discrimination; the medical superintendent should be a psychologist of the different classes of society and discover that form of diversion which is most suitable to each. The orchestra of the county asylum should be noisy, with a goodly proportion of brass instruments, clarinets, &c., and play dance music and melodies; overtures and symphonies are caviare to the general. On the stage, farces, childish pieces, harlequinades are the most acceptable. As regards dances more selection is perhaps necessary; the physician, however, should be as responsible for the dose of pleasure prescribed for each patient as for his medicine, and experience proves that a good deal of liberty may be given with advantage. Dr. Naecke carefully considers the question of the admission of strangers to asylum entertainments; curiosity merely should not be gratified, but it is an advantage that those who are interested in the insane should be invited; some of the prejudice against asylums which exists among the public may disappear as a result.

On the question of refreshments, unquestionably total abstinence from alcohol would benefit the community as a whole, but Dr. Naecke believes that the danger of alcohol is exaggerated; a pint of very light ale, which is the allowance to workers at Hubertusburg, is quite harmless, even to epileptics. The difficulty is to find a good substitute for alcohol as a beverage.

Excursions and walks outside the asylum should be enjoyed by a large percentage of patients, and in this connection it is perhaps fair to utter the paradox that "the greater the number of escapes, the better managed is the asylum."

A good deal of latitude may also be extended to patients in the choice of books, newspapers, &c.; they should not be treated as children. In acute cases (melancholia especially) some care must be exercised, but in Dr. Naecke's experience even the perusal of unfounded adverse criticisms of asylums in the daily press, by patients suffering from

delusional insanity, was not followed by any bad result. The same applies to correspondence; the superintendent of an asylum should be as liberal as possible; to withhold all letters which comment unfavourably upon the asylum is a sign of weakness.

Throughout the author is imbued with the idea that in dealing with the insane, one should extend the principle of no restraint to their moral treatment, and therefore to their diversions. Patients should not be treated as children, but like adults, and as far as possible one should respect their manhood and mode of life as in the days of their liberty. "Let us not forget that what characterises a modern asylum is not so much its splendid external and internal appearance, not that it is well warmed and lit by electricity, but the spirit which presides there, the great principle of no restraint in its various shades which should pervade even the marrow of the physicians and the staff."

Part IV.—Notes and News.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

GENERAL MEETING.

A General Meeting was held at the rooms of the Association, 11, Chandos Street, London, on Thursday, 13th October, at 4 p.m., under the presidency of Dr. Urquhart. Meetings of the Educational Committee and of the Council had been held earlier in the day.

Members present at General Meeting:—A. R. Urquhart (President), T. W. McDowall, Ernest W. White, James Chambers, H. Rayner, T. Outterson Wood, Fletcher Beach, H. Corner, H. C. MacBryan, A. Helen Boyle, W. Ernest Jones, Chas. Mercier, W. Douglas, T. W. MacDonald, Margaret Orange, F. Parris Piper, L. Rutherford Macphail, T. Seymour Tuke, R. Brayn, R. Langdon Down, W. Rawes, H. Stilwell, D. Bower, R. Baker, Alonzo H. Stocker, W. Julius Mickle, W. Crochley Clapham, L. U. Weatherly, C. K. Hitchcock, James Stewart, G. E. Shuttleworth, J. Peeke Richards, A. H. Boys, J. C. Gayton, H. J. Macevoy, R. Percy Smith, Harry A. Benham, R. L. Rutherford, G. H. Savage, H. H. Newington (Treasurer), Frank A. Elkins, Herbert Smalley, Robert Jones (General Secretary).

Apologies for non-attendance were received from Drs. Spence (Registrar), Moody, and Soutar.

The following were elected ordinary members:—Daunt, Elliott, M.R.C.S., L.R.C.P., D.P.H., Rosendale, Sevenoaks, Kent; Eades, Albert J., L.R.C.P. and L.R.C.S.I., Assistant Medical Officer, Borough Asylum, Nottingham; Longworth, Stephen G., L.R.C.P. and L.R.C.S.I., Medical Officer, County Asylum, Melton, Suffolk; Mackeon, W. J., A.B., M.B., B.A.O.R.U.I., Assistant Medical Officer, Menston Asylum, Leeds; Redington, John, L.R.C.P. and L.R.C.S.I., Assistant Medical Officer, Richmond Asylum, Dublin; Rochfort-Brown, Herbert, M.A., M.B., B.Ch.Oxon., F.R.C.S.Eng., Medical Officer, Natal Government Asylum, Pietermaritzburg, Natal, S. Africa.

The replies from honorary members elected at last annual meeting were read.

The *Handbook*.—Dr. Hayes Newington, as chairman of the Handbook Committee, reported as follows:—"I have to report that the committee appointed a year ago has now finished its labours, after much consideration as to how far the book should be revised or rewritten. We think it now as good as can be expected, having regard to the great number of opinions that had to be satisfied. It has been

considerably enlarged, and 6000 copies have been ordered. It is now on sale, and the publishers are the same as before."

Dr. RAYNER proposed a vote of thanks to Dr. Newington especially, and to the other members of the committee for the work they had done. Seconded by Dr. DOUGLAS. (Carried unanimously.)

Papers were read by A. Helen Boyle on "A Case of Juvenile General Paralysis" (see page 99); by Reginald H. Noott on "The Responsibility of the Insane: should they be punished? a reply to Dr. Mercier" (see page 53). A communication on "The Macroscopical and Microscopical Appearances of the Uterus and Appendages in the Insane," by J. Gordon-Munn, was not read as time did not permit (see page 23).

The members dined together after the meeting at the Café Royal, Regent Street, W., at 6.30 p.m.

SOUTH-EASTERN DIVISION.

The Autumn Meeting of this division was held at Springfield House, Bedford, on 10th October. From 12 to 1 p.m. the members inspected the asylum and its grounds. From 1 to 2.30 p.m. members partook of luncheon. At 2.30 p.m. the Divisional Committee of Management was held, and at 3 p.m. the General Meeting took place. Present—Drs. Urquhart (President), Ernest White (Hon. Div. Sec.), Haslett, J. P. Richards, D. Bower, C. H. Bond, R. Langdon Down, J. Bayley, J. M. Moody, A. S. Newington, R. P. Smith, F. Beach, G. E. Shuttleworth, T. S. Tuke, J. B. Emmerson, and J. Neil. Visitors—Messrs. W. G. Bower and P. Craig.

The minutes of the last meeting were taken as read, having been printed in the July number of the JOURNAL, and they were duly signed by the chairman.

Letters regretting absence were read from Drs. Nash, Hicks, O. Wood, Rayner, Stocker, and Mr. Marks.

Next meeting.—The Hon. Sec. stated that at the Spring Meeting they should visit a county or borough asylum south of the Thames. It had been proposed in committee that they should visit the East Kent Asylum at Chartham, to which of late considerable additions had been made under Dr. Fitzgerald. The proposition was adopted.

Dr. Bower read a paper on "The Inadequate Asylum Provision for the Insane immediately above the Pauper Class" (see page 6).

LUNACY LEGISLATION.

Discussion opened by Dr. White on "Prospective Lunacy Legislation."

Dr. WHITE said the object of this discussion was evident. He felt, as they all did, that when they next met in April most probably the Bill, by which they would have to stand or fall, would have been presented. It was therefore very necessary that what was to be said should be said now. He proposed to discuss the Bill as it came out from the Standing Committee of the House of Lords. All those little clauses which had been wiped out they could let lie, and they could briefly deal in the short time remaining with the clauses as they stood in the amended Bill. He proposed to open out to them the most important clauses. Four days had been substituted for seven days in the urgency order, and they would hear how the three days' system had worked in Scotland, and how the urgency order had worked under the seven days' system in England. But they might rest satisfied that four days it would be in England, because he was informed that the Lord Chancellor was absolutely determined on that point, and therefore any resolution they passed dealing with that question would, he feared, be without effect. The Lord Chancellor was of opinion that the urgency orders had been abused in the past to save the time and trouble of medical men and others; therefore he had introduced not only that reduction of the duration of urgency orders, but also the penalty which attached to the abuse of them. Clause 2 affected the duties of the authorities (reception order). He had had experience with magistrates' clerks and others, and had found that they had been in the habit of extracting considerable fees when they had been called in for these cases, and the object of this legislation was to deprive them for the future of these fees, as someone was of opinion that they had been extracted in rather an excessive manner. 5. In the past the authorities had been in the habit of removing lunatics to the union, and keeping them there indefinitely; they were

sometimes kept there as long as possible, and of course that interfered with the prospect of their recovery. But for the future the Lord Chancellor was of opinion that they should not be detained for more than three days. Then came Clause 6, the disqualifications for signing the certificate, which was a most objectionable clause, as it interfered with signing for one's own relatives, and stated that any person attached to a licensed house could not sign certificates for patients of that licensed house to go to any other. In the early Bill, before it was revised in Committee, a medical man in any way attached to a licensed house was disqualified from signing for any licensed house. 10 confers power to deal with the property of lunatics where it was extremely limited. 13. With regard to the reception of boarders, they all knew how they had been received in connection with licensed houses and hospitals for the insane; but they had never to his knowledge been received at county asylums. He doubted very much whether that power, if granted, would ever be availed of, because he considered it most detrimental to the good working of county and borough institutions to have boarders more or less free from the defined responsibility of the institution. Clause 14 stated definitely that the number of patients to be received into the old hospitals should be fixed. He thought in the past that the number received had been very elastic. There had been the parent institution and various others attached thereto, all of which were considered part and portion, and could receive patients. But the number had now been definitely fixed as it was for a borough asylum or licensed house. Clause 15 was a very important one because it affected the rules and regulations. It gave a very much extended power to the Commissioners, and he dare say there would be those who thought they had that power before, but did not avail themselves of it. 16 affected the management of hospitals. If it was not satisfactory it defined what was to be done, and how the regulations were to be carried out. 17 affected branch establishments. As he said before, the number of the patients in these had been very elastic, but by taking up the branch establishments as well as the hospitals it dealt definitely with them all, considering them as part of an asylum or hospital. No patients were to be received in the first instance into a branch establishment, and it may be visited by one Commissioner only. Clause 19 was very important, because it had been extremely modified in Committee. In the first Bill it stated, speaking from memory, that it was beyond the power of the committee of asylums or hospitals to utilise any portions of those institutions for objects other than those for which they were originally intended; that was to say, in the event of an epidemic they could not utilise a day-room for dormitory space for the time being, and *vice versâ*. That was put before the Lord Chancellor as an extremely objectionable clause, and the clause had been modified. Of course the object of the original clause was to prevent any of them using part of their day space so as to increase their accommodation generally; but when he saw the difficulty with regard to temporary use, the Lord Chancellor introduced the clause as it now stands, so that they could use it for the time being; but they would have to get the sanction of the Commissioners subsequently. 20 affected corporate bodies acting in unison and afterwards wishing to separate. The Three Counties Asylum had been combined, but they were gradually drifting apart. Then there was a clause regarding the payment of patients to which he was bitterly opposed. He was happy to say that the large majority of superintendents sided with him, and after representation to the Lord Chancellor it had been withdrawn. 21 affected pensions and allowances. That had been a very vexed question. More than ten years ago they had a very large meeting, and he (Dr. White) proposed then, on the 16th of May, 1888, that a clause be added to the existing pension clause making the modified Civil Service scale compulsory as a minimum. It was extremely pleasing to him that this was the very clause the Lord Chancellor had adopted after ten years. That distinctly fixed the minimum: they could give up to two thirds salary and emoluments, but they must give one sixtieth for each year's service. Then came the clause with regard to injuries to officers and servants. That was undoubtedly a considerable acquisition. It remained practically as it did in the Bill. It covered those who were injured in the actual discharge of their duty. 24 was with regard to offences against patients, and extended to those in workhouses. He thought he had now touched upon the most salient points in the amended Bill, and it would undoubtedly be reintroduced in the House of Lords very early next session in this form. There was another matter for consideration—the treatment of incipient insanity. A com-

mittee had been sitting upon that subject for two years, and had provided a clause for the temporary care of incipient cases. This unfortunately was surrounded with considerable difficulties. It worked all right in Scotland; but he was afraid in England they were more litigious than in Scotland, and he saw great difficulties in getting the Lord Chancellor to introduce it. It nominally did not take away the liberty of the subject, but in reality it must do so, or the patient was not properly treated. An effort had been made to get it introduced into the Bill, but he was personally more than doubtful whether the Lord Chancellor would do so. He had made these few remarks on the Bill because he felt the intense importance of speaking before it was too late.

The PRESIDENT said the meeting would agree that their findings that day should be committed to their representatives on the Parliamentary Committee. He thought it desirable to confine the discussion in the first place to four important points. With regard to the duration of the urgency order: in Scotland it was three days. There the asylum medical officers were permitted to sign the certificate of emergency themselves, so that when a patient was brought in they could detain him for three days. That of course was a grave responsibility, and they very seldom used that power. In Scotland too the magisterial authority was different from England. They did not have to go any great distance to find the sheriff, and they had no trouble in finding him, because he must always be represented, either by himself or his substitutes.

Dr. RICHARDS said if the judicial authorities were about to be increased, then he thought the necessity of the urgency order somewhat diminished, because they would be able to get at a magistrate at once. Was it therefore worth while to object to the diminished number of days? He would move, "That if the judicial authorities are adequately increased the urgency order is not necessary, and should be deleted from the Act." Mr. BAYLEY seconded.

Dr. BOWER said it would be a great inconvenience to have the urgency order absolutely abolished. It was an improvement when it was adopted, and it ought to be continued. He would propose as an amendment, "That in the opinion of this meeting the urgency order ought to be allowed to stand as it is, and not to be restricted to four days." As restricted it would be a very short time to get all the papers completed.

Dr. PERCY SMITH seconded, saying that he did not know what they would do without the urgency order as it stood, as they so often could not find a magistrate when wanted.

Dr. HASLETT supported the amendment, and stated that the then Lord Chancellor was legislating in this respect against the advice of the Commissioners.

Dr. WHITE said he was informed that they were wasting time if they supported the amendment, as he had already pointed out. The extension of the judicial authorities would abolish the abuse of the order which had existed in the past. He had received under urgency orders any number of patients who had not required them, but four days would make it so short a period that they would be less resorted to, and in addition to that there was a penalty. Dr. Bower's amendment was then put to the meeting and lost.

Dr. WHITE moved, "That the suggestion of the Bill, four days, be approved by the division."

Dr. BEACH seconded.

Dr. BOWER said it was a case of urgency order or no urgency order, and not having had his own way he should now vote for Dr. White's amendment, which was then put and carried.

The PRESIDENT said the next point was as to the detention of patients in workhouses for three days.

Dr. SMITH moved, "That not being adequately informed on the subject, the Division do not take it into consideration." Dr. RICHARDS seconded, and it was carried.

Dr. WHITE then moved, "That the clause fixing the minimum scale is acceptable to this division," as leaving a sliding scale for merit, as not interfering with vested interests, and as protecting officers in the hands of unscrupulous committees.

The PRESIDENT asked if there was any addition in sixtieths to the number of years of service. In the Civil Service it was held, in certain cases, that a man might be allowed so many years in addition to come for his education.

Dr. WHITE said he was afraid there was no promise of that.

Dr. RICHARDS said he thought it was a most important question, and something might be done in this respect by the Association.

Dr. BOWER said he did not think that clause contemplated the service of an assistant medical officer under more than one authority. Could they do something to strengthen the hands of the Parliamentary Committee? He moved that they "approve of the Pensions section of the new Bill, but would suggest its amendment by making previous service in other county or borough asylums count."

Dr. WHITE said he would withdraw his motion in favour of that, and seconded Dr. Bower's proposition, which was carried.

Dr. MOODY said he did not know whether he was too late to reopen the question of the one sixtieth for each year. He thought it too low, and he would propose that "one fortieth be the minimum," as he felt very strongly that if they could they ought to endeavour to obtain the substitution of one fortieth for one sixtieth as a minimum.

Dr. BOWER said he would agree to incorporate that in his motion, and Dr. White concurred. This, therefore, became the finding of the division.

Mr. BAYLEY said that his committee had fully discussed the matter, and they had been asked in a communication from opponents to the Bill to go carefully through the clauses, but they felt that they were not inclined to offer any opposition. They felt that any suggestions made by the Commissioners were almost always for the benefit of the patients and the asylums. He had always found, throughout his long service at St. Andrew's Hospital, that the Commissioners had always supported him.

Dr. PERCY SMITH said they at Bethlem Hospital had also received the same communication, but felt that there was no need to take active steps in opposing the Bill.

Dr. SEYMOUR TUKE said that he was sorry to see that the gist of the whole Bill seemed to be conceived in a spirit of suspicion. He was very much struck with the wonderful amount of confidence which existed in Scotland between the authorities who made the laws and the medical men who carried them out.

The PRESIDENT said that before they left that roof they would certainly desire to express their very warmest thanks to Mrs. Bower for having taken so much trouble to make their meeting a success (applause). He was sure Dr. Bower would understand how very much the Division appreciated his kindness and hospitality.

Dr. BOWER said it had been a great pleasure to him to receive the Division there. He felt it was a great honour that they should have visited Springfield House as the first private asylum.

The members and visitors subsequently visited Bunyan's cottage and Elston Church *en route* to Bedford, where they dined together at Roff's Dining Rooms.

SOUTH-WESTERN DIVISION.

The Autumn Meeting of this Division was held at the Grand Pump Room Hotel, Bath, on Wednesday, October 19th, under the Presidency of Dr. Urquhart. There were also present Drs. Benham, A. Newington, Aveling, Lindsay, Blachford, Goldie Scott, Noott, Craddock, Bristowe, Wade, Fox, Douglas, Weatherly, Soutar, Barraclough, Sproat, Morton, Stewart, Cobbold, and the Hon. Secretary (Dr. P. W. MacDonald).

Geoffrey Hungerford, L.R.C.P., L.R.C.S., Assistant Medical Officer, County Asylum, Dorchester, was admitted a member of the Association.

Letters of apology for non-attendance were intimated from Drs. P. Warry Leas, H. Manning, and Briscoe.

The minutes of the last meeting were held as read.

Next Meeting.—The Hon. Secretary said that he had not yet received any invitation, and he was instructed by the Committee of Management to suggest that the arrangements be left to them and the Secretary, as was done last time. The meeting would, as usual, be the third week in April, Tuesday 18th.

DISCUSSION: DR. BLACHFORD'S PAPER.

Having stated that this paper had been published in the JOURNAL for July, and having reviewed the salient conclusions which Dr. Blachford drew, the President called upon

Dr. MACDONALD, who said he would confine his remarks to one or two heads,

for, as all knew, the causes of mental disease were legion. In mentioning alcohol in that city so famed for its waters, one need not hesitate to take exception to the remark so often heard on the teetotal platform that alcohol was filling our asylums. Apologising for the district from which he came, he had to contradict that statement, for over a very long series of years he found less than 5 per cent. of the cases brought under his notice were due to alcohol. Dr. Blachford had worked it out to 8·2 per cent., but it had to be borne in mind that those figures dealt with a city, which was totally different to an agricultural district. But how did these figures compare with the returns of the Commissioners in Lunacy? The percentage due to alcoholism taken from the Blue Book was 15·2—in his opinion another example of the fallacy of basing calculations on general statistics. Each district should apply itself to finding out the percentage of alcoholic cases, which varied so much in different parts of the country. He hoped no one would go away with the idea that he did not recognise in alcohol a great cause of disease, but what he did take exception to was the attempt on the part of many to hold it up as the one great cause of mental disease; yes, and in districts where reliable statistics could prove it was not. If by causing poverty, misery, and anxiety, alcohol indirectly produced disease, then we are agreed; but it was an entirely different thing to say alcohol was filling our asylums. He had been greatly struck with Dr. Blachford's observation as to the relation between syphilis and general paralysis. There was a time when every general paralytic was labelled syphilitic, and he had once heard an eminent authority actually say so. But this same authority had changed his opinion, and did not hold that view now. Another point of great importance was the few juvenile or developmental general paralytics met with at Bristol. In the course of ten or twelve years he had met with some six or seven, and the conclusion he had come to was that he knew of no reason why one should not be born a general paralytic any more than a syphilitic; and he thought many of the hopeless idiots who had been classed as idiots were nothing more or less than general paralytics. If we admit—and I am hopeful it is admitted—that general paralysis may be an inherited disease, then I think heredity must play an important part in juvenile general paralysis. I now come to the last and most important cause mentioned, viz. heredity. Dr. Blachford said the percentage of heredity was 33. His opinion was that one half of their patients were foredoomed from heredity, for he was quite convinced it was only in a few of their cases that they got the slightest reliable information on this most important point. He did not mean that it was necessary the father or mother should hand down the insane cell to the son or the daughter, but there was a predisposition to insanity; and it was this predisposition they claimed to exist. Professor Virchow, in his Huxley Lecture, reiterated this view of the matter. His opinion was that so long as they propagated the species by the marriage of the tainted, the defective, and enfeebled (sowing broadcast the seeds of degeneration), so long would these cases multiply and their asylums fill, till the burden became so great that the ratepayers of this country would have to turn to the Legislature for help. It was from them (the medical profession) aid and advice would be sought, and it was for them now to show what was taking place in the country districts and large cities as well. On a former occasion he had offended by speaking plainly on the question of alcohol as a cause of insanity, and he hoped Dr. Stewart would not get him into trouble that day.

Dr. Stewart said that much greater importance was sometimes assigned to our expressions of opinion than we intended, and when Dr. MacDonald said that it was not alcohol that was to blame but poverty and insanitary conditions and the misery afflicting unfortunate Dorset hinds which led to so much insanity, he might some day regret his expression of opinion if translated to mean that he went and flouted the alcohol theory. He (the speaker) did not want to say that alcohol was the destroyer it was often represented to be. He had no greater repugnance for anything than for the claptrap orators and the teetotal platform; but one might out of that repugnance fall into the other extreme. Supposing he was right in saying that they were doing what they could to point out to the general public how they might nullify the results of inheritance, and were doing their best for the good of the people, then he maintained they must look to other causes besides those to which Dr. MacDonald had referred. One of the causes he had not referred to was that rush and push which are so prominent characteristics of the

present day. People to insure something like a successful career considered it necessary to help nature to perform her functions. It was usual for the medical man to tell his patient he required stimulant, and as the power of the medical man was enormous, alcohol was taken. He had been trying to get it known that there were other things that could stimulate a man beside alcohol. The stimulant he used was food, and alcohol was not a food ("Question"). He thought that they would be right in accepting as the percentage of cases in which alcohol was the cause of insanity—something more than the figures Mr. Blachford gave, and something less than those of the Commissioners.

Dr. SOUTAR said that he was sure neither Dr. MacDonald nor anybody was prepared to contend that alcohol in excess would not induce mental degeneration. But the important fact was whether it was in their community inducing the amount of mental disorder that had been asserted. It was perfectly clear that the percentage varied with the locality. During the last five years at Barnwood House there had only been two admissions caused by alcohol. Often on consideration of cases it was found there were various co-operating causes. To be able to lay the finger on one single cause was very rare indeed (Hear, hear). Poverty and anxiety were co-operating causes with alcohol. He gathered that Dr. MacDonald meant that the distress was more effectual than the poison in inducing the insanity in a drunkard's family. Dr. Blachford had confirmed the opinion long held that heredity was the great predisposing cause, and had shown there were all sorts of exciting causes capable of inducing the attack. All sorts of ordinary maladies induced mental disease in the already unstable.

Dr. BARRACLOUGH provided statistical information as to the insanity of Wiltshire, and remarked that the statistics of the Commissioners were compiled from information furnished by the relieving officers, who took no trouble to get at the conditions of life of the patient. His experience led him to express his accord with Dr. MacDonald in the question of the causation from alcohol. It played a very much less part in the causation of insanity than was usually asserted. As regarded syphilis and general paralysis most people would now agree that syphilis had much less to do with it than was generally supposed, and that in spite of the statement of Dr. Noott that it was evident in 75 per cent. of the cases. Wiltshire was for long the county in England with the greatest proportion of insane. Now it was bracketed fourth, having 1 lunatic in 290 of the population. Intermarriage was responsible for a very large amount of the insanity which existed. In the old township of Calne it was said that every individual was related to everyone else; and although that was an exaggeration, it showed there was a large amount of intermarriage, and the result was the proportion of lunatics instead of being 1 in 290 was in the township of Calne 1 in 189. In crime Wiltshire stood unfavourably, and nine out of ten cases were of an immoral nature. The character of the county he thought supplied the explanation. There was a lack of railway communication, and many places were miles removed from any station. Consequently stagnation existed, all the brightest intellects left the flotsam and jetsam of humanity behind.

Dr. NOOTT said it was extremely difficult to get at the facts because friends either carelessly or wilfully kept facts back. He did not think that there was much doubt alcoholism would cause an insane inheritance. Alcohol would bring about mental debility. There was nothing that could be so clearly demonstrated as the effect of alcohol on brain tissue, and it must therefore be a cause of insane inheritance. Their proportion at Broadmoor of cases caused to some extent by alcohol was just over 22 per cent., but in almost all these cases the question of heredity applied. Alcoholics were often the children of epileptics.

Dr. BENHAM said as the paper they were debating was prepared at the Bristol Asylum, he was naturally in accord with what Dr. Blachford said about alcohol. What was forgotten was that alcohol was very often the symptom of disease rather than the cause. He had been consulted twice within the last few months in regard to the marriage of persons who had been insane; and where pronounced insanity had existed, he had advised against marriage. Arrayed against his opinion were some of the great authorities of the county, and their views were brought under his notice in one case by the parent who consulted him. These opinions did not cause him to change his own. In one case his advice was taken, and in the other it was not. This showed that when one had strong views on the subject, he might

do something for the future purity of the human race as it was their duty to do. He wished to bear testimony to the accuracy with which that paper was prepared, particularly with regard to the heredity statistics. Every case in which doubt existed was excluded, or at least the doubt went against heredity rather than for it.

The PRESIDENT said he thought, from the tone of the meeting, they had pretty well made up their minds that the incidence of alcohol in regard to insanity had been much overrated (Hear, hear). They had been placed in possession of facts by Dr. Blachford and Dr. MacDonald, and he was sure that neither gentleman would have given them to the public had he not been absolutely sure of his ground. Their statements were in accordance with the general average of other institutions. What fell from Dr. Barraclough was specially interesting, because there was no county where statistics were so well dealt with as Wiltshire in the days of Dr. Thurnam. He hoped Dr. Barraclough would bring forward a paper dealing with the time since Dr. Thurnam published his last calculations. With regard to the incidence of syphilis, the further east they went apparently the more convinced were physicians that syphilis was the cause of general paralysis. Although a considerable proportion of the general paralytics under his care were undoubtedly syphilitic, he should not insist on such an extreme statement unless there was an absolute history obtainable. He did not see that it was practical to revive ancient laws to restrict the propagation of the race to the exclusion of the insane. Only the other day he was consulted by a clergyman who was about to marry a person whose family was steeped in insanity and neurotic maladies. He could not be induced to break the engagement even in view of the whole circumstances. And that was his usual experience in regard to this great wrong. It was curious that their discussion should touch this question, for while in the Abbey that morning he had chanced on the monument to Malthus, with its long and appreciative inscription.

Dr. BLACHFORD replying, agreed with Dr. MacDonald that the percentage of alcohol was very often exaggerated; but that was not surprising. The Commissioners' statistics were based on figures supplied by relieving officers, to whom the cause was nearly always given as alcoholism, or not known; even then, instead of it being so returned, it was attributed to alcohol. In many such cases evidence of prior insanity was afterwards found. With reference to Dr. Noott's statement of 22 per cent., he thought they naturally found drunkenness existing in the criminal classes, so that must not be taken to apply generally.

Dr. NOOTT explained that the impression that the asylum of Broadmoor consisted of the criminal classes was quite erroneous; 81 per cent. were either murderers or would-be murderers, but the patients were not of the criminal class of the ordinary kind. They were simply criminals by the accident, having become insane and having committed a crime before they had been taken care of. There was a very large percentage of the lower middle class, and a very small number of the well-to-do. In the lower middle classes the relatives thought two or three times before they got rid of the breadwinner. In the upper classes, again, more care was taken to control the insane persons before they could do any harm. If people could only be induced to notice the first signs of lunacy, and to put the patient into their hands, Broadmoor need not exist. In reply to a question by the President, Dr. Noott said there was absolutely no trace of the incidence of alcohol in the well-to-do classes at Broadmoor.

LUNACY IN PRIVATE PRACTICE.

Dr. BRISTOWE read the paper on "Lunacy in Private Practice" (printed at page 66).

Dr. LIONEL WEATHERLY was to have followed with a paper on "Lunacy and the Public," but apologised for having been unable to fulfil his promise. He said public opinion, if that public opinion is based upon a knowledge of facts, is no doubt from every point of view a helpful thing towards a better legislation, but if that public opinion is only a mass of hysterical and emotional ideas in the minds of those who know nothing about the subject, and if such emotional ideas are embodied in new legislation, then that legislation must be pernicious. They must be agreed that English legislation in connection with lunacy had to a great extent been a legislation which had its foundation in hysterical ideas, and was pernicious in absence of knowledge of facts. It seemed passing strange to find, as one did find from practical experience, that the very people who would shout loudest about

their rights, and who wrote to the newspapers about taking away the people's liberties, and perhaps, going further, said that the insane were placed where they were badly treated, that these were the people who, when insanity invaded their own family, were most indignant on discovering the red tape with which they were surrounded, and by which they were restrained in obtaining asylum treatment. If a person had to be sent to an isolation hospital because he was suffering from scarlet fever, the medical officer had not first to call to his aid some individual who knew nothing about the subject before he could be removed. But when anyone fell victim to mental disease he was hedged round with the legislation of ignorance before he could be placed out of harm's way. Was it not time that they who knew should be heard in reference to the course pursued, a course which they recognised as having a pernicious influence on the persons affected with this disease? To come to private asylums, against which the cry has been loudest, "Oh, you ought to do away with them, because it is the self-interest of the proprietor to keep his patients as long as possible, and to get the most he can out of them!" It only required a man of common sense to recognise that self-interest acted beneficially. It was the interest of the proprietor of a private asylum to make the patient comfortable, to make the relatives contented, to maintain his reputation, so that there should not be a word said against him. There could not be a superintendent of any public asylum who felt so keenly that he should not keep a patient a day longer than necessary as the superintendent of a private asylum, because he knew the public could not accuse him of self-interest in the matter.

He could not help feeling that if this unwarrantable suspicion was still allowed to grow the recovery rate of insanity could not possibly increase. They had once more heard that day how necessary it was that insanity should be treated early. How were they going to obtain that for the well-to-do classes if they were hemmed round with restrictions, and if the public were educated in these false beliefs? The Commissioners should lay more stress on the fact, and should let the public know it, that they see personally every insane person detained under the Lunacy Acts; that they speak to every one, and that they ascertain whether it was right that he should remain in asylum care. The Commissioners should let the public know that they have not found people in asylums who ought not to be there, and ought to refer to the efforts made for the welfare of the insane. If they did not do this, and did not educate the public, the medical profession would continue to be handicapped in their treatment of insanity.

Dr. Murray Lindsay said that the shrewd and judicious remarks they had just listened to were just what they might have expected from Dr. Weatherly's common sense. He agreed with everything he had said. There was no question that there was a great prejudice against public asylums, and particularly against private asylums. He had an experience in both, and his impression was that private asylums were, and had been for many years, very well conducted. They were more open to inspection than public asylums; there were more visitors. He had never seen the least desire to retain cases unduly even for one day. His feeling was that more harm had been done by premature discharge than by unnecessary detention, and there was a tendency to discharge cases prematurely. He had seen no case of unnecessary detention during his long years of service in Scotland and England. Public opinion was very prejudiced and very strong against asylums. He had often met with people who had said they could not send their relatives to a private asylum because of the pecuniary interests of the proprietor. He had always contested that, and he had even given it as his opinion that patients were safer in private than in public asylums. The Commissioners might do something more than they did, and asylum proprietors themselves ought to do something more to enlighten the public.

Dr. Wade said that he heard Lord Shaftesbury declare that the Parliamentary Commission of 1877 had not discovered a single case of wrongful detention in an asylum, and yet the Lunacy Act of 1890 was passed positively without being discussed. It would certainly be a great gain if the Lord Chancellor were to consult those who had practical experience in lunacy; but he had it from high authority that legislators did not want the opinion of experts. That being so he did not see what could be done.

Dr. Weatherly.—Educate the public.

Dr. Wade.—How can we? The public did not come to these meetings, but

might be reached through the medical press. Sometimes it was difficult to get the magistrates to certify, because the medical men could not make up their minds that the person was dangerous. They should impress on the profession the necessity of sending to asylums dangerous epileptics and persons with fixed delusions.

Dr. S. Craddock said he held strong opinions on the subject of dangerous epileptics, but he had been very unsuccessful in getting them admitted to asylums. He had even had cases returned home from asylums, patients he considered ought to have been permanently detained. There was no class more dangerous. He remembered sending Dr. Wade one of these cases, but his certificate was returned for further details. As usual he sent it back, saying that he never added to or detracted from anything he had written. After much correspondence Dr. Wade received instructions to discharge the patient unless he could get a medical man to examine him further, and that medical man was not to be Dr. Craddock. As to the examination of insane persons by the magistrates, it was generally of a most imperfect character. He found when he went to give evidence there would be sometimes a magistrate who would not go into the case at all, and then another time there would be a magistrate who ignored the medical evidence, and tried to get information for himself, in which he was very rarely successful. He had under his care in the Bath workhouse a considerable establishment for imbeciles. Occasionally it happened that they became violent, and he had to transfer them to the asylum. He had set his face against their being brought to the Guildhall, two miles away, which was the course of procedure advocated by the magistrates and the board of guardians. The magistrates did not like going to these cases at all, and still less when they had to go two miles uphill. The board of guardians saw no reason why he should take up that position, but the Local Government Board and the Commissioners in Lunacy fully supported him. Something ought to be done to make magistrates go to the insane instead of having them put into the dock like criminals. If they undertook the office of the justice of peace they should be prepared to carry out the duties in a proper manner.

Dr. Soutar thought many of Dr. Weatherly's remarks open to question, as to whether, for instance, public opinion was not, upon the whole, healthy. If public opinion had been altogether influenced by those who were in charge of asylums it might have happened that their present position would not have been so good as it was. After all, the liberty of the subject was a sentiment to be upheld, and if it had been exaggerated it was better it should be exaggerated than disregarded. He could not see that the Act of 1890 had done much to retard their work. As many came into the asylums now as before. The difficulty was, just as often as not, that the doctor would not certify. Now and again the magistrate would overrule the opinion of the doctor, but that was rather exceptional, and so long as they had human beings to deal with they must expect such incidents. With regard to public and private asylums, he thought there was room for both. Certain patients were better in a good private asylum and others in a good public institution. It was a question not so much whether it was a public or a private asylum, but whether it was a thoroughly well-managed asylum. If the best was done for the patient it did not matter whether it was public or private.

Dr. MacDonald said he had listened with very great pleasure to Dr. Bristowe's able paper on an interesting subject, and he could not help recalling to their minds the early days of this Division, and Dr. Bristowe's profound scientific communications. Reference had been made to the lingering prejudice against asylums, and he thought by no other means or method could this steadily decreasing prejudice be still further removed than by the teaching and advice of members who, like Dr. Bristowe, had first acquired a sound knowledge of mental disease and asylum treatment, and afterwards worked as general practitioners. It was thought that the urgency order might assist in the early treatment of mental disease, but as the superintendent of a public asylum he should be sorry were the urgency order to become applicable in the case of the ordinary county patient. He could not help saying that very often the delay was occasioned by the reluctance, if not inexperience, on the part of medical men themselves to sign the necessary certificates. Quite recently he had admitted a patient concerning whose case he had previously been consulted and advised special treatment, but owing to hesitation and delay on the part of the doctors, he (the patient) had made a determined attempt at suicide, after which he was hurriedly sent to the asylum. With regard to Dr. Weatherly's

remarks, he thought, with Dr. Soutar, that many of his statements were open to criticism. He was of opinion that the best class of private asylum was, and always would be, required; at the same time they should not forget that for some considerable time legislation had favoured public control in the management and treatment of the insane. He failed to understand Dr. Lindsay when he said that private asylums were more open to inspection than public asylums, and that patients were safer in the former than the latter. It might be said, being a public asylum officer he was biassed, but he could assure the meeting he had a thoroughly open mind. If we could only teach the public to recognise asylums as hospitals for the treatment of disease, much, if not all, of our present difficulties and troubles would disappear.

Dr. BENHAM, alluding to the attitude of the medical profession generally, thought the new regulation that all medical students had to spend some time in an asylum would be of great benefit, for future practitioners would be much better equipped with knowledge and able to sign certificates in difficult cases. Men going out from themselves as Dr. Bristowe had done would do much good, and only by the influence of such gentlemen amongst the general practitioners would the dislike of asylums be diminished.

The PRESIDENT said that it was quite a pleasant surprise to hear the Act of 1890 well spoken of. He had been for years under the impression it was a detestable measure. Why it actually conferred a monopoly on Dr. Weatherly, and he did not think anything could be worse than that! He was firmly of opinion that private asylums should be free to grow and to multiply. Let those that were worthy survive. Those that were not would soon go under. The central difficulty and vulgar error was that all insane persons were regarded with distrust and suspicion and aversion. It did not matter who had to deal with them, they were all in the same category. There could never be a better word than "asylum" for their purpose. What they had to do was to purify the public conception of it and not to change the name. As to the certification of the insane, it was a never-ending wonder to him that they found the medical men of England bold enough to certify. When it came to accurate diagnosis and weighing the *pros* and *cons.* in a difficult case as to whether a person ought to be certified or not, what medical man could be free from fears of future prosecution? It was much easier to let difficult cases alone, but the daily newspapers showed the disastrous results. To make the discussion practical, was there anything the Division could do to mend matters in view of the Bill soon to be reintroduced into Parliament? That was the question for them.

Dr. WEATHERLY, in reply, said he was absolutely in accord with Dr. Wade, and members would remember he had spoken previously of their not hiding their light under a bushel. They should publish their views in the medical newspapers. He quite agreed that each asylum should stand on its own merits, for they got their patients how? simply by recommendation of former patients and their friends. That being so, there was no doubt the properly managed asylums would prosper. He maintained again that the very self-interest of which the public accused them, the private proprietors, was unquestionably the greatest safeguard for the patients and their relatives.

The PRESIDENT pointed out that the superintendents of public asylums receiving private patients stood in no other relationship to their patients and their patients' relatives than did the private proprietors. Any shortcoming in duty, still more any misdeeds, would come back on their own heads, and they would suffer just as keenly.

The members afterwards dined in the hotel, which brought a most successful meeting to a close.

NORTHERN AND MIDLAND DIVISION.

A meeting of this Division was held on the 12th October, at the County Asylum, Mickleover, near Derby.

Members present—Drs. Richard Legge, C. K. Hitchcock, J. S. Adair, S. Rutherford Macphail, W. S. Kay, James Middlemass, Alfred Miller, H. Harold Greenwood, and Crochley Clapham (Secretary). Visitors—Edmund Vaudrey, J. T. Story, John Richards, and F. B. Rackstraw.

Dr. LEGGE was voted in the chair, and the minutes of the last meeting having been read and confirmed, the time and place of the next meeting were fixed for Wednesday, April 12th, 1899, at Hatton Asylum, Warwick.

A paper on the "Thyroid Treatment of Insanity" was then read by Dr. Middlemass. (See page 40).

The proceedings closed with a vote of thanks to Dr. Legge for presiding, and for his hospitality in providing lunch for the members.

After the business meeting, the members of the branch were escorted through the wards of the asylum by the medical officers.

SCOTTISH DIVISION.

A meeting of the Division was held in the Royal College of Physicians, Edinburgh, on Thursday, 10th November, Dr. Urquhart, President of the Association, in the chair. Present: Drs. Clouston, Havelock, Hotchkiss, W. W. Ireland, Carlyle Johnstone, McDowall, R. B. Mitchell, Parker, Ford Robertson, Rutherford, James Rutherford, jun., Turnbull (Secretary), Watt, and Welsh. There were also present as visitors Drs. Ireland, junr., M'Intyre, and Sturrock.

Dr. GEORGE ARTHUR RORIE, Clinical Assistant, Royal Asylum, Edinburgh, was admitted as a member.

Dr. HAVELOCK opened a discussion on the Fatal Accidents Inquiry (Scotland) Act and the Workmen's Compensation Act in their Bearings on Asylums (see page 15).

Dr. GILBERT A. WELSH read a paper on "Syphilitic Insanity," which will appear in a future number of this Journal.

Dr. CLOUSTON said that he wished to direct the attention of the members to the Inebriates Bill, 1898, which would come into force in the beginning of next year, and which, although it applied only to inebriety with crime of some sort, embodied the principle that inebriety could be treated for long periods by the deprivation of the liberty of the subject for inebriety alone against the subject's inclinations. If a man had been three times drunk and incapable he could be brought up, and in addition to being punished he could be kept for three years in an inebriate reformatory. At last what the medical profession had been contending for for many years had now come to pass, that an inebriate might be reformed against his will. That was one step, and the other was that under the provisions of this Act local authorities could take public moneys wherewith to set up inebriate reformatories. The Town Council of Edinburgh, at the beginning of 1899, could assess the ratepayers for an inebriate reformatory. Another part of the Act was not only for the criminal inebriate, but for the habitual drunkard. The Dalrymple Act had been stretched in different ways. The Colleges of Surgeons and Physicians in Edinburgh and Glasgow had combined in a representation to Lord Balfour, on whom, as Secretary for Scotland, was laid the duty under the Acts of making regulations and bringing them into operation. He had nominated five members of a committee for this purpose, but in the committee he had not included any medical opinion. It seemed to be most extraordinary that the regulations for the control of what was often a nervous disease were to be made by five lay members. That was a thing that they felt keenly, for it showed how little medical opinion had got into the minds of statesmen. This was a very important Act; its importance lay in the principles it embodied, and the certainty that these principles would be extended to all inebriates in course of time. In the title of the Act nothing was said about criminality; it was stated to be an Act for the treatment of habitual drunkards, although only applicable to those who had been convicted of being drunk three times.

Dr. URQUHART said that he had asked Dr. Clouston to make this statement so that if anyone present had any suggestions to make, Dr. Clouston could receive and consider them. Had it not been for Dr. Clouston this important matter would have proceeded without comment. They had seen by the newspapers that this non-medical committee had been appointed, and it had been allowed to pass, as the medical profession almost invariably allowed these things to pass. It was largely their own fault that they did not weigh more in the political world.

Dr. CARLYLE JOHNSTONE said that they should support the Colleges, and suggested

that a representation should be drafted by the Chairman and forwarded to the proper quarter.

Dr. URQUHART pointed out that they must not commit the Association.

Dr. CARLYLE JOHNSTONE said that they could commit the meeting, and he thought that would be in order. He therefore moved that the Chairman be given authority to show the feeling of the meeting in the proper way by communicating with Dr. Clouston. The motion was seconded by Dr. Rutherford, and was carried.

After the meeting the members dined together as usual in the Palace Hotel.

[We understand that Dr. Clouston's name has been added to the Committee under the Inebriates Act by Lord Balfour of Burleigh, the Secretary of State for Scotland, on the nomination of the three Scottish medical corporations.—ED.]

BRITISH MEDICAL ASSOCIATION.—EDINBURGH MEETING.

ADDRESS IN PSYCHOLOGICAL MEDICINE BY SIR JOHN BATTY TUKE.

Sir JOHN B. TUKE heralded his address by drawing attention to the facts that it was the second upon this subject which the British Medical Association in annual meeting had demanded, and that the previous address by Sir J. Crichton-Browne (delivered in 1890) was the first address on Psychological Medicine in the history of the Association. That such a discourse should be required twice within eight years is indeed a striking proof of the important position which our specialty has taken of recent years in the hierarchy of the medical sciences. To some degree, perhaps, it is also due to the personal distinction of the deliverers of the respective addresses—men who have so largely contributed by their labours to the advance which these addresses at once denote and illustrate.

The immediate topic with which Sir John B. Tuke dealt was "the modern conceptions of the etiology of insanity." The study of the insanities in former times was surveyed in a not very sympathetic way. Our unfortunate predecessors must not be judged too severely, especially when we consider that they admittedly did not possess the data which now afford "starting-points to the psychiatric physician for the scientific study of his subject." Unhappily, the art of medicine has often to be practised while knowledge is still very deficient, and the sad havoc which time has played with favourite views in general medicine which prevailed a quarter of a century ago, should make us modest in boasting of our advance. Sir John presented a telling contrast between the state of knowledge in 1864 and at the present day. But it is only, as it were, yesterday that we were talking about the cortical cells as centres of energy, or else as storehouses for residual impressions, while now they are but victual stores—

> ". . . . And who doth know
> How long we please they may continue so."

Nothing is final in our knowledge; and, indeed, in cerebral anatomy and pathology we have hardly yet reached beyond the initial stage. "I verily believe," says Sir J. Batty Tuke, "that the changes of conception of the nature of the insanities is much more due to the establishment of scientific data bearing on the antecedents of mental action than to the generalisations of the philosopher as to mental activities. . . . Gradually—no, I should say rapidly; perhaps too rapidly for complete assimilation—there has been presented to the physician knowledge of a cerebral apparatus on which he is warranted in basing working hypotheses and practice. Until that apparatus was demonstrated he could not assert, except as an assumption, the fundamental physiological principle that mental action is a function of connection, or the pathological corollary that interruption of connection is the cause of impaired mental action." The members of our specialty, "knowing that they have a mechanism to deal with, solution of the continuity of which in any part of its course may affect its function, have a scientific foundation for the study of morbific influences productive of interruption of connection." The great work which has been done of late years in the pathology of insanity was considered, and two illustrations of a general character are given of the good results from such study. "In former times the theory of the effect of the mind on the body held a

foremost place, and gave rise to many misconceptions. For instance, the general degradation of the system, the complications in the intestinal and reproductive systems, which are such marked and important symptoms in many of the insanities, were regarded either as the results of abnormal action or as its cause. Now that we recognise that the brain exerts trophesic functions over all the organs of the body, we are alive to the fact that such degradations are referable to imperfect brain action, that they are secondary on the reduction of its nourishing action, and are to be treated accordingly." "Another evidence of change is afforded by the acceptance and extension by the psychiatrist of the principle that all mental symptoms are produced by the action of the same causes of disease which act in other systems than the nervous." Sir J. Batty Tuke concludes by advocating warmly the modern hospital system of treating the insane. Incidentally he remarks, "We know that if we exclude general paralysis and epileptic insanity from consideration, at least 80 per cent. of recent cases are amenable to treatment." We agree with his observation that valuable time is often lost, particularly in England, where "the procedure for the transmission of insane persons to asylums is so absurdly cumbrous as to prevent many persons being placed under treatment until such time as the probabilities of recovery are seriously lessened or the case is hopeless."

Psychology Section.

President's Address.—The Neuroses and Psychoses of Decadence.

Dr. Clouston, in opening his address, briefly referred to his corresponding paper of 1890 on "The Neuroses of Development." One of these groups has as its cause a faulty development, the other an unphysiological decadence of the brain. As during development so during decay, one organ may change more rapidly than another. Thus in the latter case may be established a neurosis through unrelational decadence. The speaker glanced briefly at climacteric influence and the influence of neuro-vascular decay, and pointed out how in the life history of the neuron we see in its youth a susceptibility to external impressions, and in its age a liability to succumb to poisonous and degenerative agencies which are respectively characteristic. Heredity is not as powerful an agency in the production of decadent neuroses as in the origin of developmental. It seems to act in a different way. In the latter case it stops the reproduction of a bad stock; it is an actively destructive force. In the former it shows itself as a mere weakening of normal supports, so that the organism thus tainted yields unduly to the strain of life or to other morbid conditions. Comparing the statistics of the number of the population at a given time whose age was between 1 and 25, between 26 and 50, between 51 and 75, and between 75 and 100 with the proportion of deaths from nervous diseases occurring in each group, it appears that the neuroses prevail largely in the period of brain growth; that the best years of life are very free from them, and that decadence brings them on with a rush, senility being the most deadly neurotic period of all. The signs of nerve decadence, the clinical characters of the psychoses of old age, and the remarkable diminution in old age of the power of resisting toxic agents, notably alcohol, were dealt with at some length, and in Dr. Clouston's usual impressive way. To him it appears that there are three types of nervous and mental lesions connected with decadence. First, those connected with vaso-trophic degeneration. Second, the degeneration of the motor and sensory systems, which constitute the progressive degenerations. Third, the climacteric and senile insanities, in which the primary lesion begins in the mental tissues and mental areas. Dr. Clouston ventures on an hypothesis with regard to the history of senile mental decay. The mental faculties do not undergo decadence in the order of their development. Therefore probably the same is true of the cortical neuron. As the memory—the permanent recording of impressions—is the first to disappear, it is probable that the molecular structure of the protoplasm of the neuron is the first to suffer in decadence. Probably the gradual destruction of the dendrites and their gemmules and the neuraxons next takes place, and is the cause of decadent reasoning in senility.

A Discussion on Suicide in its Psychiatric and Social Aspects

was opened by Dr. Sibbald, who presented a series of most interesting statistical tables. From these it would appear that the figures for Great Britain show, as similar tables for most other countries do, a gradual though fluctuating rise in the

suicide rates during thirty years. England and Wales show a rise from 67 to 86 per million—an increase of 28 per cent. Scotland in the same period rose from 40 to 54 per million—an increase of 35 per cent. The rates throughout are considerably higher for England and Wales than for Scotland. It is suggested that suicide is of late more often regarded as dependent upon insanity, and is therefore not concealed so much as before. The various methods by which suicide is effected are analysed with very striking results. Hanging is the mode least open to error, either by concealment or mistaken diagnosis. In the fifteen years 1865–79 suicides by hanging amounted in England and Wales to 25 per million, in Scotland to 16 per million. In the following fifteen years the rates were 24 per million in England and Wales, and 16 per million in Scotland. Statistics for shorter periods show, of course, more fluctuation, but no progressive increase. Dr. Sibbald has studied the rates for smaller areas in Scotland, and finds that the incidence of suicide varies very much in different localities, but that in each locality the ratio remains the same from period to period. He gives tables showing the number of deaths by firearms and cutting and stabbing for thirty years, also the deaths by poisoning and drowning. These tables show that the proportion of deaths per million from these various causes remain steady, but that of such proportion the proportion attributed to suicide has increased, and the proportion to accident has diminished. The conclusion to which the author of this most carefully worked paper comes is that with regard to suicide there has been really a wonderful steadiness in the rates, and that there is ground for believing that the apparent increase is due to the registering of deaths in recent times as suicides which would in former times have been registered as accidents.

Dr. Haig discussed suicide as a result of error of diet. He regards melancholia as due to the circulation of impure blood in the brain—uricacidæmia or collæmia. If, he thinks, we could wipe out of our diet two substances, animal flesh and tea, we should almost completely eliminate its pathological excesses. Dr. Haig calls attention to special features in the depression of "collæmia," such as that it is paroxysmal and temporary. He ingeniously accounts for this, as well as for diurnal, accidental, and annual fluctuations in melancholia, by explaining the various modes by which, under varying circumstances and conditions, the amount of uric acid circulating in the blood varies. A number of other influences—season, age, sex, various diseases, &c.—are, according to this view, if we rightly understand it, capable of being explained by varying conditions of collæmia. In fine, Dr. Haig holds that in diet lies the cause of suicide, and in a proper and scientific revision of diet lies the hope of prevention.

Dr. Macpherson, Honorary Secretary to the Section, read an abstract of a communication from Professor Morselli, of Genoa, dealing principally with the classification of suicide.

Insanities of Inebriety.

Dr. J. F. Sutherland, Deputy Commissioner in Lunacy for Scotland, read a paper on "The Insanities of Inebriety from the Legislative and Medico-legal Standpoint." Dr. Sutherland counts inebriety high as a producer of insanity, placing it second, and that by a short way, to heredity. Probably, however, those who attribute most weight to heredity would place the latter in an entirely different category from any cause acting in a sense externally. Dr. Sutherland seems to consider alcohol responsible for as many as 25 per cent. of all cases of insanity and imbecility which pass into asylums. He reviewed previous legislation on the subject of the prevention of habitual inebriety, and held that the Bill of last Session could be improved by a clause prohibiting vendors from supplying alcohol (1) to certified inebriates who are put under recognisances, and not yet deprived of liberty; (2) to certified inebriates on probation; (3) to certified inebriates, whether discharged on probation or not, for a period of three years thereafter. He believes that such legislation could be worked successfully in Scotland, yet he sees considerable difficulty in making it operate successfully in large towns. It appears to us that these difficulties would be very serious, taking into account the numbers that would need to be dealt with, and the extreme unwillingness of those charged with the administration of the law to go even within statutory limits beyond the demands of public opinion. Arguing on the remarkable difference between the prevalence of inebriety in towns, and its comparative rarity in country districts, a patent fact,

Dr. Sutherland plainly affirms that inebriety, whether criminal or non-criminal, is a disease or vice, or both, for the vice long indulged ultimately ends in disease, and is in the main, like insomnia, neurasthenia, neuralgia, and hysteria, met with in large centres of population, and in great measure due to unhygienic and uncomfortable surroundings, to the facilities for illicit sale, to vicious and contaminating environments, to customs and habits long practised in certain strata of society, and so forth. But if this way of looking at inebriety be correct, surely the duty of society should begin by endeavouring to get at the causes, and not by punitive measures or measures tending to restrict vice or disease already established. The liberty of the subject, says Dr. Sutherland, has become a fetish. A law to lessen the degradation and disgrace both of the individual and the community cannot be considered an invasion of liberty. So far, most modern thinkers whose eyes have been opened to the miseries produced by alcohol will agree with him. But he goes further, and in this probably few of us will follow him. He tells us that the criminal law in this country is far astray in regard to its attitude towards the authors of homicide, assaults, &c., committed by persons in a state of intoxication. Intoxication, he says, is insanity, fleeting it may be, but from the disorder of the senses and faculties producing as perfect a picture of insanity as is to be met with in the wide and diversified range of lunacy. His feeling is that the plea of insane at the time is a proper special defence, or failing the acceptance of that, that the crime, after medical and other evidence has been received, should be reduced from murder to culpable homicide.

At the conclusion of the discussion a resolution was moved by Dr. Sutherland, seconded by Dr. Yellowlees, and unanimously adopted, calling upon the Council of the Association to press the need of further legislation, and stating the opinion of the Section that no such legislation would be effectual unless it provides compulsory care for habitual inebriates from all classes of society, and unless it prohibits the sale of intoxicants to known and certified inebriates. We have not heard how this last clause of the resolution is to be rendered effective in actual working.

The Phenomena of Hypnotism and the Theories of its Nature.

Dr. Milne Bramwell discussed the general bearing of the question of hypnotism at some length, and detailed a series of cases of his own illustrating its useful therapeutic effects. These cases were of great interest, but seemed to show nothing absolutely new. Dr. Bramwell has clearly been an assiduous worker in the field, and has had some results which are extremely encouraging and successful. What is new is his claim to have proved that the hypnotised subject is not at the mercy of the operator. This he says he himself at first believed, but finding that individual patients varied very much in their susceptibility to suggestion during hypnosis, he initiated a series of experiments on the volition in hypnosis. The plan he adopted was to question profound somnambules during hypnosis as to their own mental condition. Their replies showed that when in the hypnotic state they knew that they were hypnotised, but retained completely the sense of their personal identity and relationship with the outer world. They could reason as logically as in the waking state, and were confident that they could resist any suggestion that was displeasing to them. He gave some remarkable examples of persons refusing to adopt a suggestion made to them, whilst in the hypnotic state, to commit crime or even the semblance of crime. His conclusion was that not only is the volition unimpaired in hypnosis, but hypnotic experiments or treatment exercise no weakening effect upon the volition in the waking state. Judging from his experience, Dr. Bramwell is of opinion that the employment of hypnosis by medical men who are acquainted with the subject is absolutely devoid of danger. Dr. Bramwell dwelt at length upon the various theories of hypnotism propounded since the time of Braid. He contested Bernheim's notion that suggestion explains hypnotism, whereas suggestion is merely the machinery by which the phenomena of hypnotism are excited. He also strongly contended against the views prevalent in the Nancy school that automatism and weakened will characterise the hypnotic state.

Mr. F. W. H. Myers, in a very polished discourse, dealt with what might be called the theoretic aspects of hypnotism. Though we must admire this author's skill in exposition, we cannot see that the idea conveyed in his elegant phrases

treating of "supraliminal" and "subliminal" spheres of mental activity bring us much more forward than did the "unconscious cerebration" of the school of Carpenter. Contrasting hypnotism and hysteria, he tells us that in hysteria we lose from supraliminal control portions of faculty which we do not wish to lose, and we cannot recover them at will. In hypnotism we lose from supraliminal control portions of faculty which we wish to lose or are indifferent to losing, and we can recover them the moment that we will. Comparing hypnotism and genius ("products of subliminal mentation uprushing into ordinary consciousness with actual benefit to the waking life") he discusses the question whether hypnotism succeeds in bringing up faculty from submerged strata into conscious control and enjoyment, and answers that to do this very thing is the essence of hypnotism. Again, in sleep we have a condition of shutting off of the supraliminal life of relation, of external attention, and the concentration of subliminal attention upon the profounder organic life. The first obvious effect of hypnotism is to bring sleep more fully under control. After glancing at sleeping-waking states, Mr. Myers said that the essential meaning of hypnotism is always the same—a fuller control over subliminal plasticity. Attributing the therapeutic effects of hypnotism to this fuller control over subliminal plasticity (the activities which are busy with organic as distinguished from intellectual life), and recognising that the phenomena of hypnotism are in the main due to suggestion, he tells us we need to ask what suggestion really is. It is not ordinary persuasion, that is clear. Mr. Myers believes that subliminal relations between man and man play a real part in the production of hypnotic phenomena.

Other Papers.

An instructive case of *Hæmatoporphyrinuria* was reported by Dr. Hotchkiss, of Gartnavel.

Drs. Kerr and Bois, of Hartwood, related the results of their trials of spleen and thyroid extract in the treatment. Twenty-two patients were treated with spleen extract. Mental recovery occurred in eight, physical improvement in seventeen. The most favourable cases appear to be adolescent males suffering from stupor. The mode of use recommended is by capsules of fresh liquid extract, twenty grains in each.

Dr. W. Bernard read a paper on the need of recognising weakmindedness early in children, and pointed out that more distinct criteria of this condition at the earliest period of life were needed.

Drs. Dawson and Rambaut read a valuable paper analysing the ocular phenomena in forty cases of general paralysis.

Dr. Hogben read a paper on pauper lunatics in private dwellings in Scotland.

Dr. Marie, of Dun-sur-Auron (Cher.), presented a brief report on the family care of the insane in France, and distributed a report on the colony at Dun, from which it appears that from the time that the colony was founded, at the end of 1892, up to the end of 1897, 673 patients have been admitted. The admissions during the year 1897 were 175, and at the end of the year there were 555 patients in residence. These figures alone show that the institution of family care at Dun has been a success. The colony had existed six years without an accident. The system was not alone economical, but was beneficial to the patients, who preferred it as being a more natural life than that of asylums. The town of Dun contains 6000 inhabitants, among whom the patients are boarded. The patients are by no means all dements, many being melancholics. There is a special hospital. The average cost is half of that in the Asylums of Department of Seine, whence the colony is fed.

Aphasia in Relation to Testamentary Capacity.

On July 28th a conjoint meeting of the Sections of Psychology and State Medicine was held to consider this subject.

A discussion on this subject was introduced by Sir William Gairdner, who, having indulged in a brief retrospect and shortly glanced at the anatomical bearings of the question, said that he was willing to concede that a man who had always been aphasic, who was deficient in anything that went to make the speech faculty, never could become a reasoning animal, or rise above the level of the dog, the elephant, or the horse. But when they came to the case of a man who by accident was lamed as regarded the mechanism of that particular faculty, having had all his

reasoning powers beforehand, he was not willing to admit that he necessarily suffered any derogation from the higher faculties. The point there was how far did that laming of one faculty interfere with a man's capacity to make a will? That question could not be answered in any general sense.

Referring to a recent decision in a will case (not of an aphasic, however) tried before the Scottish Court of Session, Sir William Gairdner quoted Lord President Robertson's ruling (premising that the Scotch law, founded on the old Roman civil law, was superior to the English judge-made law—a thing of shreds and patches). (Laughter.) The Lord President said this:—"He must remind them that they had not got to try the question whether in the general sense she was sane or insane. The question was much more narrow and limited. It had reference to this particular will—had she enough mind to understand it, and did she understand it?—because there were many people in this world who had got what might be called a crack in them, and were really eccentric, and yet whose wills were perfectly good. Therefore in this case they had no abstract question to determine as to whether this woman was sane or insane, but they had to consider first the will and say whether she was able to understand it. They might think that it was too complicated for her, and if so, then they would find against the will. On the other hand, they might think, although they had heard a good deal of trash about the woman's eccentricities"—(let them observe with what contempt he brushed aside the attempt to prove theoretical insanity)—"that still she had enough sense to make a will if it was a will that she could understand. . . . It was to be observed in favour of the will that it was not very complicated, if they thought the woman really wanted it. They then would have to consider whether there was satisfactory evidence that her mind was applied to it. But in the meantime, as regards the woman herself, he dared to say that they had no doubt she was a person of rather low intelligence. She had not been well educated, and there was in the family a strain of eccentricity." He concluded that "they were left a good deal in the dark as to what share this woman had in the making of the will at all. But it was for the jury to say whether this will was her own will. They must not break the will unless they really thought either that she was unfit to make it, that she had not sufficiency of mind to make it, or else that she was weak and was led into making it by other people." That was very much in accordance with the way he himself put it. (Applause.) It threw the *onus probandi* entirely upon those who dispute its validity to show that the testator was not fully cognisant of what he was doing when he made it, or was misguided by interested parties. That was the position in law. How was it that the position was altered by aphasia? The fact of aphasia shifted the *onus probandi* upon those who considered the will genuine. It made a difficulty in the way of the testator giving expression to his true desires and true will, and those who supported the will had to prove that that difficulty was successfully overcome. He held that a person completely aphasic had, as regarded his inner mind, the capacity to make a will quite sufficient to meet these legal conditions in all probability. He exemplified the case of Pasteur, who for the last few years of his life suffered from left hemiplegia. Was there the least reason to suppose that if, instead of being on the right side of his brain that lesion had been on the left side, Pasteur would not have been able to form that will in his own mind, would not have been able to make a valid will, providing that he could have positively impressed everyone that that was his will? He held that there was no doubt whatever that his testamentary capacity might have been totally unaffected, except that which they might regard as outward mechanism. The difficulty they placed in the way was an additional obstacle to be got over, and the multiplication of these obstacles might incidentally preclude the possibility of giving effect to the intention, which nevertheless might have been quite clear in the testator's mind if he could only have got it out. The question of whether an aphasic could make a will was a question of detail entirely. It was a question that must be submitted to a jury upon the individual case. The principle was, did the man know what he wanted, did he form a clear conception of what he wanted, and did he succeed in giving effect to that conception?

Dr. William Elder said that every case of aphasia was mentally and intellectually on a lower level than the patient was before he was affected. Between that condition, however, of slight degradation of the mental and intellectual altitude of an individual and the other condition of actual mental incapacity there was a vast

difference, and there were many steps, so that it must necessarily always be a difficult question to answer where sanity ended and insanity began, where testamentary capacity ended and incapacity began. It must be laid down as a general principle that no one could make a will who did not possess the power of understanding and producing language of some sort. It would not be held to be a will if a person simply indicated by signs before he died that he wanted such and such a thing to be done, nor would it be held to be a will if a person gave directions by word of mouth. A person must be capable of understanding language, so that he knew either what he said or what was read to him. That implied that he could hear and understand words if he could not read or understand pantomimic language; but if he could read and understand what he read, then it was not necessary for him to hear or understand pantomimic language. Given that a person understood what was in a document, it was not necessary that he should be able to speak in order that he might execute a testamentary deed. He might indicate what he wished by means of writing, or by pantomime, or in other ways. A complete case of auditory aphasia, which implied word deafness and word blindness, would be incapable of making a will, because, not being able to understand any form of language, he would, in all probability, not be able to communicate his wishes by producing any form of language. From a consideration of the whole subject he had come to the conclusion that some forms of aphasia might render a patient incapable of will-making, such as auditory aphasia, pictorial word blindness, pictorial motor aphasia, and graphic aphasia, although he was not necessarily mentally incapable.

Dr. Clouston (Edinburgh) said there were two points which he insisted every man must attend to. The first was the test question whether it was the will of the individual or whether it had been suggested to him. The second was that in making the will of any aphasic patient it was the duty of every medical man to put the contrary case. A man had left, say, £100 to his wife and £100 to his daughter—to A and B. They were bound to ask him if it was for B and C or for D and E that he intended the money. No will of an aphasic could be a legal and proper will unless the contrary case had been thus put, because an aphasic would assent to anything if put to him in a certain way.

Insanity in Criminal Cases.

(Also considered by the Conjoint Meeting.)

Dr. Mercier opened a discussion on the Plea of Insanity in Criminal Cases. He asked the assent of the meeting to three propositions. In the first place he asked them to say that no insane person should for any act be punished with the same severity as a sane person would be punished for the same act. Every institution for the insane was conducted in accordance with that principle. The second proposition was that there was for every insane person a certain sphere of conduct for which he ought to be entirely immune from punishment. Every insane person might commit certain deeds for which he should not be punished at all—misdeeds which, if they were done by sane persons would be rightly punishable, but which in the case of insane persons it would be clearly and manifestly wrong to punish at all. His third proposition was that very few indeed of the insane were wholly irresponsible. He meant by that that there were very few indeed of the insane who ought never to be punished. With a full appreciation and expectation of the misunderstanding and obloquy and odium he would incur by the statement, he affirmed that for very many of their wrong acts the majority of lunatics ought to receive some punishment; further, he affirmed that explicitly or implicitly that was the opinion of every practitioner who had experience of the insane, and, furthermore, he affirmed that punishment of the insane in some form or other was in practice in every institution for lunatics. Let them clear their minds of cant in this matter. Who was there among them who, if a patient on parole came in drunk, would not refuse him his parole next time, and time after time when he applied for it? Who was there that, when a woman had been fighting or smashing, would not forbid her to attend the weekly dance? Who was there among them that would not stop the tobacco of a man who was discovered pilfering or bullying? It might perhaps be denied on other grounds that this was punishment. It might be said that a woman who was so violently maniacal as to be fighting and smashing was unfit to attend a dance, and was forbidden for that reason, and not

for punishment. But he declared that in a patient who had been smashing or tearing up her clothes not in an excess of acute mania, but in an outbreak of temper, she would be excluded from the dance, not because she was unfit to be present, but as a punishment. They relied upon the temporary withdrawal of privileges to act as a check in preventing abuse in future; that was to say they withdrew it as a punishment.

The practical importance of these propositions with regard to the plea of insanity was that while there were some cases in which they might rightly ask the court to refrain altogether from punishing the criminal, there were many more cases in which they could not justly demand such immunity, but in which they could fairly argue that the criminal was responsible to some extent, but was not wholly responsible, and that therefore, while he ought to be punished, he ought not to be punished with the same severity as an ordinary offender. While it was common for a crime to be committed under the promptings of delusion, it was extremely rare for the delusion to be of such a character that if it represented the actual facts of the case it would completely justify the act. He exemplified the case of Prince, the murderer of Mr. Terriss.

In conclusion, the speaker laid down the following propositions:

(1) All lunatics should be partially immune for all their misdeeds; (2) Every lunatic should be wholly immune for certain misdeeds; (3) Very few lunatics should be wholly immune for all misdeeds—corollary—the plea of insanity, if established, did not necessarily involve the total immunity of the accused from punishment; it did necessarily involve his partial immunity; and (4) That in order to establish the plea it was necessary to prove the existence in the accused of one or more of the following mental conditions:—(*a*) exonerating delusion; (*b*) such confusion of mind that the accused was incapable of appreciating in their true relations the circumstances under which the act was committed or the consequences of his act; (*c*) extreme inadequacy of motive; (*d*) extreme imprudence in the act; and (*e*) the non-concurrence in the act of the volitional self.

QUEBEC MEDICO-PSYCHOLOGICAL SOCIETY.

The physicians attached to the asylums of the Province of Quebec—Arthur Vallée, medical superintendent of the Quebec Lunatic Asylum, T. J. W. Burgess, medical superintendent of the Protestant Hospital for the Insane, E. J. Bourque, physician-in-chief, George Villeneuve, medical superintendent, F. E. Devlin, assistant superintendent, F. X. Perreault, A. J. Prieur, C. Laviolette, and E. P. Chagnon, assistant physicians of the St. Jean de Dieu Lunatic Asylum, Longue-Pointe,—held a preliminary meeting on the 16th February last, at Longue-Pointe, for the purpose of organising themselves into a society for the advancement of the specialty.

It was resolved that the association should be known as the "Quebec Medico-Psychological Society," and that meetings should be held in turn at the different asylums of the province. The following officers were elected for the years 1898–9: *President.*—Arthur Vallée, M.D., medical superintendent of the Quebec Lunatic Asylum. *Vice-President.*—T. J. W. Burgess, M.D., medical superintendent of the Protestant Hospital for the Insane, Verdun. *Secretary.*—E. P. Chagnon, M.D., assistant physician of the St. Jean de Dieu Asylum, Longue-Pointe.

Pursuant to this organisation the first meeting of the Society took place at St. Jean de Dieu Asylum, on July 14th, 1898, Dr. Vallée, president, in the chair.

Election of New Members.

A. Marois, assistant superintendent, A. Bélanger and C. S. Roy, assistant physicians to Quebec Asylum, L. J. O. Sirois, physician to St. Ferdinand d'Halifax Asylum, and J. V. Anglin, assistant physician to the Protestant Hospital for the Insane, Verdun, were elected members of the Association.

Resolutions.

Mr. Villeneuve moved that Honourable Mr. J. E. Robidoux be elected Patron of the Society. Mr. Burgess seconded the motion. Carried unanimously.

Moved and unanimously voted:

1. That Mr. Gustave Lamothe, C.M., be elected as legal adviser of the Society.

2. That the Inspectors of Insane Asylums be invited to form part of the Association.

3. That Messrs. Villeneuve and Chagnon be chosen to draw the rules and bye-laws of the Society.

4. That the members of the Society have learned with grief the death of the lamented Dr. L. M. A. Noel, medical superintendent of St. Ferdinand d'Halifax Asylum, and member of the Quebec Medico-Psychological Society, and that they express to Mrs. Noel their sympathies and their most sincere condolence in her great misfortune.

5. That the members of the Society present to the Reverend Sister Superioress of St. Jean de Dieu Asylum their best thanks for her hospitality towards the meeting.

6. That the second meeting take place next October, at the Protestant Hospital for the Insane, Verdun.

Papers.

Medical Certificates.

Dr. Villeneuve regretted that most of the medical certificates on admission of patients are far from being equal to the importance of the measure which they authorise. If a person be in a mental condition required by law to be admitted into an asylum, this fact is to be established by a medical certificate made out according to formulas B and C, signed by the same doctor and certified under oath. The administrative decision of the medical superintendent and the proceedings taken rest on the statements and facts so consigned. He is thereby justified in keeping the patient under observation for no definite period. The insufficiency of medical certificates, the want of care with which they are delivered, the futility of the motives which they contain, the uncontrolled facility with which doctors accept the information furnished by interested friends, are all causes of worry. To his knowledge people have tried to secure admission for incorrigible children, unmanageable deaf mutes, troublesome dotards, cases in the last stage of chronic affections, such as locomotor ataxia. Cases of typhoid fever, meningitis, encephalitis have been brought to the asylum as suitable for treatment there. The law is very clear in stating that the medical certificate must state the mental condition of the patient. It must enumerate the symptoms and facts of insanity personally observed; it must state the reason why the patient should be admitted into the asylum, either for treatment or as a matter of public order or security. Besides the certainty of the proof of insanity the medical superintendent must find in it the above-mentioned reasons to justify himself in admitting the patient. Therefore this certificate must contain facts and not vague presumptions, especially when the indications for admission are not exclusively deduced from the particular from of insanity form which the patient is suffering.

There are circumstances where it may be necessary to have recourse to a magistrate—when the certifying doctor is obliged to rely for the most part on statements made by friends of the patient, when investigations are necessary to establish the veracity of these statements, or when difficulties arise as to certain classes of patients such as the persecuted. In these cases it is well to proceed before a magistrate, according to the law concerning dangerous lunatics, and to take the testimonies of the persons who have witnessed the insane actions of the patient; after that a warrant is issued by the magistrate, who orders the patient to be sent to an asylum. Dr. Villeneuve believes that the medical certificate ought to be divided in two distinct parts, as in England and the State of New York. In the first part the doctor should state the symptoms of insanity which he has himself observed; in the second he should state the facts which he has known from other persons, at the same time naming these different persons.

Rubeoliform Eruptions produced by Sulphonal.

Dr. Burgess reported a case which, after the use of sulphonal, presented an eruption closely resembling that of measles.

A Case of Sitiophobia cured by Sulphonal.

Dr. A. Vallée reported a case of sitiophobia in which sulphonal seems to have given excellent results. A. B—, aged 26, admitted to the Quebec Asylum in May, 1893, suffering from melancholia with stupor. She was in a complete state of mutism and refused all nourishment. The stomach-tube was required for many months. The patient remained in stupor, motionless, head dropping on the chest, indifferent to everything around her, and absorbed in her delusional conceptions. In spite of tonics, stimulants, electricity, hydrotherapy, and generous diet, we could not obtain the least improvement. She continued speechless, offered more and more resistance when fed artificially. The organic functions were greatly deficient, nutrition was bad, the extremities were cold and cyanosed. She lost flesh rapidly and became dirty in her habits. The prognosis was bad. Dr. Vallée said, I read in the Journal of Mental Science (October, 1893) a note by Dr. Brough, on the use of sulphonal in sitiophobia, and decided to try the remedy on A. B—. On the 10th day of November, at 8 p.m., I gave her 40 grains of sulphonal. She slept very well, and on waking next morning made signs to her nurse indicating that she wanted something to eat. Food was brought immediately, and was eaten greedily. I continued to give sulphonal for a few days; the appetite remained good, and the patient continued to eat with relish. Now her mental condition is not much better, but she is a little brighter, she talks more readily, and her general health is excellent.

Foreign Body of the Intestine; Death; Autopsy.

Dr. Burgess reported this case.—R. S—, aged 32, a case of long-standing dementia. July 3rd, 1898.—A slight attack of diarrhœa. Little or no pain, no constitutional disturbance. Treated with lead and opium pills, which checked diarrhœa. July 7th.—Complained of slight pain in the abdomen; no signs of tenderness and no constitutional symptoms. Bowels loose again. July 9th.—Still complains of pain in abdomen; slight tenderness on pressure and some tympanites. Vomited several times during day, but no diarrhœa. Pulse slightly increased, but full and soft; a rise of one degree in temperature. Appendicitis suspected. July 10th.—Did not sleep last night, in spite of a full dose of morphia, and is much worse this morning. Constant vomiting, with signs of failure. Pulse and temperature both much increased, and a good deal of tenderness over abdomen, especially on right side. Dr. Armstrong called in consultation, but decided that it was too late for operative interference. Patient died at 2.40 p.m.

Autopsy.—Body that of a young man dead twenty hours. Post-mortem rigidity complete. Skin sallow. Post-mortem lividity well marked on back, sides, and thighs. Signs of commencing decomposition in front of abdomen, which is distended. Subcutaneous fat absent; muscles of a dark red colour. Abdomen distended with a turbid brownish fluid having a fæcal odour. On the left side, about the level of the umbilicus, is a small, black, gangrenous area, in which projects a broken piece of needle. Evidence of intense general peritonitis.

In the great omentum another fragment of needle is discovered. On separating the coils of the collapsed portion of intestine, a wire (hair-pin) is found penetrating the mesentery about two inches from the edge of the bowel, penetrating also one of the coils of the ileum. This wire passes backward, catching up on its passage a second coil of ileum, and is then embedded in the quadratus lumborum muscle of the left side. On removal of the intestines they are found normal until about three feet from the ileo-cæcal valve, where the intestine becomes much dilated; the walls and mesentery are much thickened and inflamed. This condition persists for about eighteen inches to a point where constriction has occurred through the mesentery of the intestine. On opening up the affected section about eighteen inches from the ileo-cæcal valve there are found three or four sharply cut lacerations of the intestine, as if from a sharp-pointed instrument. About this point perforation had occurred. At every place where the wire came in contact with the tissues is traced a brownish-black discoloration. The appendix was inflamed externally, but practically normal within. *Stomach* normal. *Kidneys* normal. *Spleen* small, capsule wrinkled, very flabby; on section pale and firm; weight two ounces. *Liver* congested, with cloudy swelling; lobules indistinct. *Heart.*—Right side contains soft, reddish clot; left

side is contracted and empty; all the valves normal. *Lungs.*—Right lung free from adhesions, somewhat congested; crepitant throughout on section; weight nineteen ounces. Left lung adherent by lower lobe posteriorly and to diaphragm; weight sixteen ounces. Bronchi in both lungs normal.

The hair-pin had probably been swallowed some time previously, as there was no trace of irritation in the stomach.

Influence of Traumatism on Mental Affections.

Dr. A. Vallée reports the following case:—L. T—, æt. 62, admitted to the Quebec Asylum 12th March, 1894, suffering for the last five months from a severe attack of melancholia, brought on by pecuniary troubles and alcoholic excesses. Believing himself to be damned for ninety-nine years, he kept perfect silence. Nothing could distract him for a moment, and he opposed a passive resistance to all our endeavours. His general health gradually gave way under the influence of melancholia, complicated by insomnia and sitiophobia, and he was sent to the infirmary.

May 3rd.—I was called to extract a foreign body which he had thrust into his eye. He was sitting on his bed quite silent. A black spot was noticed at the internal angle of the right eye. It was the head of a nail four inches long, and was at once extracted. Alarming symptoms soon appeared: face very pale, extremities cold, pulse filiform, left arm and leg paralysed.

May 4th.—He rallied a little, but the hemiplegia continued.

May 5th.—Partial convulsions set in over the face, lips, neck, and left arm. They lasted about twenty-four hours.

May 8th.—Hemiplegia disappearing; mental state improving.

After three or four days all the nervous symptoms have disappeared except a divergent strabismus of the right eye, which lasted about fifteen days. The general health and the mental condition continued to improve gradually till, at the end of May, he was able to walk round the asylum by himself. His memory was perfectly good, but he does not know why he thrust the nail in his eye. On the 15th of July he left the asylum perfectly recovered.

Another case where traumatism hastened recovery occurred here a few years ago. O. R—, æt. 25, admitted suffering from a violent attack of acute mania. A few weeks after his admission he quarrelled with another patient, and was bitten very severely on the thumb. Intense nervous tremors set in, and lasted for an hour. Thereafter O. R— became conscious, made a rapid recovery, and was discharged in a few days.

RECENT MEDICO-LEGAL CASES.

Reported by Dr. Mercier.

[The editors request that members will oblige by sending full newspaper reports of all cases of interest as published by the local press at the time of the assizes.]

Reg. v. *Bryson.*

John Bryson, an elderly man, was indicted for the murder of a woman with several aliases. The murder was a peculiarly brutal one, the woman's head being battered into a shapeless mass, both eyes destroyed, and the face rendered unrecognisable. No evidence of provocation is reported. The prisoner had been drinking a good deal just before the murder, and when arrested immediately after was much the worse for drink. It was proved that he had had a sunstroke, and had narrowly escaped being killed by lightning, and that since these experiences he had been subject, especially when in drink, to outbreaks of unprovoked violence, of which he appeared afterwards to have no recollection. Several such outbreaks were described by witnesses. The prisoner, by advice of his counsel, pleaded guilty of culpable homicide. Sentence was delayed until the afternoon, when the judge stated that after consultation with his colleague he had been able to decide to treat the prisoner in a comparatively lenient manner.—Ten years' penal servitude.—(The Lord Justice's Clerk.)—*Scotsman*, August 31st.

A fresh instance of the growing practice of considering the mental condition of the convict in awarding punishment. The prisoner was allowed to plead guilty of

homicide merely, and sentence was mitigated in consideration of the state of his mind.

Reg. v. *Truett.*

Charles Truett, 60, labourer, was indicted for the murder of his sister-in-law. Prisoner walked into the home of the deceased and stabbed her with a long knife, inflicting a wound of which she died. Shortly after he said, "Revenge is sweet. I don't care if I hang, as long as she dies." It was proved that the prisoner had long had an erroneous belief that his father's property had been unequally divided, and that the deceased was responsible for the unequal division. At the police station he was noticed to be very strange in his manner, and it was shown by the prosecution that he had long been regarded as not responsible for his actions.—Guilty, but insane.—Central Criminal Court, July 28th (Mr. Justice Lawrence).—*Times*. July 29th.

This case illustrates once more several very common occurrences. The evidence showed clearly that the prisoner knew the nature and quality of his act, and knew that it was wrong. Yet he was found insane. Evidence of insanity was furnished by the prosecution. And it is a fresh instance of the commission of a serious crime by a man who had long been known to be insane, and who ought not to have been at large.

Reg. v. *Copeland.*

Prisoner, a woman æt. 28, was found lying in three feet of water with a child under each arm. She was restored, but the children were dead. On being rescued she said that "she had been put about, and didn't know what to do with herself. She had had no sleep all night, she was very ill, and her husband was angry with her." It was proved that she was much weakened by illness and recent operations, and it was suggested that her mind had thereby become affected.—Guilty, but insane.—Stafford Assizes, July 26th (Mr. Justice Channell).—*Times*, July 27th.

There was no evidence of insanity except the act itself and the inadequacy of the motive; yet an unquestionably just verdict was given.

Reg. v. *Viney.*

William Viney, 72, labourer, was indicted for the murder of three of his children and the attempted murder of a fourth. Prisoner, who had been at one time well off, but had sunk to the position of a hawker, and who had been deserted by his wife, took his five children to Leyton marshes, and there cut the throats of four of them, killing three and seriously injuring the fourth, while the fifth ran away. It was proved that some time before, the prisoner had been considered unsound in mind. Dr. Scott said that the prisoner was of weak mind, but he could not certify him as insane at the present time. The prisoner had told him that a power of darkness came over him, and he thought it right to kill the children, so that they might go to a better world. The jury found a verdict of guilty, but said that there were extenuating circumstances, and strongly recommended the prisoner to mercy.—Central Criminal Court, September 15th (Mr. Justice Darling).—*Times*, September 16th.

A case very similar to that of Copeland (*supra*), but with decidedly stronger evidence of insanity. Yet Copeland was found insane, and Viney was not. Clearly one of those verdicts was wrong. Are we then to blame the law? Scarcely. Under the same law that condemned Viney, Copeland was found insane. It was not the law, therefore, that required the condemnation of Viney. The discrepancy is to be found in the fact that the judges were different, the counsel different, and the juries different. So long as the personal element in trials remains, so long will there be a discrepancy in verdicts. But in spite of the differences in the verdicts, the fate of the convicts will be the same, and thus the personal variation is rectified.

Reg. v. *J. A. Campbell.*

Prisoner was the Superintendent of the Garlands Asylum, and was charged with the offence, under the Lunacy Act, 1890, of having intercourse or attempting to have intercourse with a female patient under his care. The facts were undisputed, and the plea of insanity was raised. It was proved that the prisoner had for years been habitually intoxicated, and that for months past he had rendered

himself conspicuous by habits of absurd braggadocio, which led those with whom he associated to regard him as insane, and as subject to delusions of grandeur. The offence was committed with scarcely any precautions in the way of concealment, and was of a nature that, considering the position and the age of the prisoner, of itself suggested insanity. On the other hand, it was proved that even up to the time of the offence the prisoner was capable of transacting difficult business in a thoroughly efficient manner.—Guilty, but insane.—Carlisle Assizes, November 4th (Mr. Justice Phillimore).—*East Cumberland News*, November 5th.

Reg. v. *Yeo.*

Henry Yeo was indicted for publishing libels concerning Dr. Bevan Lewis, Superintendent of the West Riding Asylum. The prisoner was the editor of a weekly paper called the *Spy*, published at Manchester, and in 1896, while undergoing a sentence of twelve months' imprisonment for libel, he was transferred from prison to the West Riding Asylum as a criminal lunatic. He appears to have been released at the expiration of his sentence, and subsequently published in his paper a series of articles containing gross libels upon Dr. Bevan Lewis. The prisoner defended himself, and in his address to the jury he alleged that Dr. Lewis, by means of some electrical apparatus or patent process, could tell what he was doing wherever he was. He appealed to the judge to inquire into his persecution, and to order an expert to examine the asylum and discover the apparatus by which the persecution had been effected. The jury found the prisoner guilty, and he was sentenced to twelve months' imprisonment. The prisoner's wife, who had assisted in publishing the libels, pleaded guilty to this offence, and in sentencing her the judge said that as her husband was subject to delusions, and could scarcely be held responsible for what he did, she had done very wrong to assist him.—Yorkshire Assizes, August 1st (Mr. Justice Grantham).—*Times*, August 2nd.

Reg. v. *Anderson.*

James Anderson, 45, ship carpenter, was indicted for the murder of his wife. Prisoner was of intemperate habits, and often quarrelled with his wife. The evening of the murder the two appeared to be on exceptionally amicable terms, but at about 8 p.m. the neighbours heard a disturbance, and it was found that the prisoner had killed his wife by cutting her throat, and had then inflicted a severe wound upon his own. It appears that he believed that his wife exerted a "spell power" over him, and could make him, even when he was away from her, do deeds that he would have shrunk from; that she tried to poison him with beetroot and onions; that others besides his wife were his enemies, and were trying to thwart him in every way, and were conspiring against him; and that for the last twenty years his relatives have regarded him as insane. He was found unfit to plead, and ordered to be detained during her Majesty's pleasure.—(Lord Trayner).—*Scotsman*, September 17th.

AFTER-CARE ASSOCIATION.

The annual meeting will be held on Monday, February 6th, 1899, at 72, Grosvenor Street, W., the residence of Sir Samuel Wilks, President of the Royal College of Physicians, who will preside. The past year has been, we are informed, by far the most successful one in the annals of the Association, both in the number of cases assisted and in the amount of the subscriptions. Unfortunately the subscription of £50, promised by Mr. Mocatta if £1000 were raised during the year, cannot be claimed.

The active assistance of the Medical Superintendents of Asylums is earnestly sought: many have long given it the most energetic support, but it is hoped that the increased means and experience of the Association will enable it to deal even more satisfactorily with the cases in future entrusted to it than it has done in the past.

THE JOURNAL.

The Editors have attempted in the present issue to improve the form, type, and outward appearance of the JOURNAL as far as this was possible without adding materially to the cost of production. The alterations will speak for themselves, and the Editors trust that members of the Association, remembering the above limitation, will find the changes improvements, rendering the JOURNAL more worthy of the important interests which it now represents.

The Editors enclose an appeal to the Members of the Association to aid them in increasing the monetary prosperity of the JOURNAL, in which, they believe, much might be done by united effort.

CRAIG COLONY PRIZE FOR ORIGINAL RESEARCH IN EPILEPSY.

The President of the Board of Managers of Craig Colony offers a prize of $100 for the best contribution to the pathology and treatment of epilepsy, originality being the main condition. The prize is open to universal competition, but all manuscripts must be submitted in English. All papers will be examined by a Committee to consist of three members of the New York Neurological Society, and the award will be made at the annual meeting of the Board of Managers of Craig Colony, October 10th, 1899.

Each essay must be accompanied by a sealed envelope containing the name and address of the author, and bearing on the outside the motto or device which is inscribed upon the essay. The successful essay becomes the property of the Craig Colony for publication in its Annual Medical Report.

Manuscripts should be sent to Dr. Frederick Peterson, 4 West 50th Street, New York City, on or before September 1st, 1899.

RESIGNATION.

Dr. Symes Saunders has retired from the office of medical superintendent to the Devon County Asylum, having recently entered on the fortieth year of his service in that institution. The venerable chairman, Mr. Saunders, who has been connected with the Devon County Asylum ever since it was opened, in the course of an appreciative speech on the occasion of Dr. Saunders' resignation, reviewed the financial history of the institution, and moved that a pension of £742 10*s.* per annum be granted. This sum had been arrived at on a calculation of two thirds of the salary and emoluments. We congratulate Dr. Saunders on the finding of the County Council, and express the hope that he will enjoy his retirement after so many years of work. It may be noted that an attempt to arrive at an understanding with his successor, to the effect that a pension would not necessarily follow on his service, was ruled out of order by the chairman of the County Council.

PRESENTATIONS.

At the Warneford Asylum, Oxford, Dr. Neil had recently the pleasant duty of presenting to Mr. Matthews, the chief attendant, who has captained the cricket club for thirty-seven years, a handsome clock; and to Dr. Goldie-Scot, who has served as assistant medical officer for the past year, a marble timepiece and other souvenirs from the patients. We record these incidents with pleasure.

THE WELFARE OF THE FEEBLE-MINDED.

The Duchess of Sutherland, who, as President of the National Association for Promoting the Welfare of the Feeble-minded, presided at a special meeting of the Association held on June 11th, at Stafford House, London, put the case for generous public support of the objects of the Association with clearness and force. The physically and mentally defective child, she pointed out, has every chance, under existing conditions, of becoming part of the "scum" of our population, which is just another way of saying that many vagabond and criminal adults were in childhood mentally defective children, who might have been trained for better things. "They knew," her Grace said, "that in many of our asylums to-day there were men and women whom Mr. Asquith spoke of on the second reading of the Prisons Bill as persons of morbid and erratic nervous systems, to whom it was difficult to apply anything like the ordinary canons of moral responsibility." Such persons, however, are not only to be found in asylums, they are also in prisons, in workhouses, and, when not of vicious habits, they float about as part of the starving and struggling flotsam and jetsam of the industrial life of our large cities. When so high an authority as Mr. Asquith so clearly, and with strict accuracy as to facts, expresses the opinion that a considerable number of prisoners are persons of morbid and erratic nervous systems, to whom it is difficult to apply the ordinary canons of moral responsibility, there seems good ground for the Duchess's remark that the Association is doing in a measure a work which the State should do for itself. But the State takes no account of the roads along which come the lunatic, the pauper, and the criminal, although they are tolerably well defined; and until the State takes the reasonable view of its obligations in this connection in at least making some attempt to prevent that which may be preventable, such associations as this have excellent work to do. Her Grace remarked truly that fifty years ago there would have been no hope for those deficients. It would be interesting to consider whether the problem of the deficient member of society was quite the same fifty years ago as it is to-day. Pauperism has decreased, lunacy has increased, and a certain change has come over the criminal population during the last fifty years. The violent, insubordinate prisoner of the last generation of criminals has been replaced by a type of criminal more amenable to prison discipline. Concurrently with this change, no doubt, there has been considerable amelioration of the disciplinary methods adopted towards criminals, but whether *post hoc ergo propter hoc* is still an open question. The social changes that underlie those facts have an important bearing upon the whole class of questions which have as their common feature the element of deficiency. Every step towards organised efficiency in trade, commerce, education, and society generally, means that a new test has been created for the discovery and elimination of the weak and the unfit. That truth is not always present to the minds of those who advocate changes in our commercial, industrial, and social arrangements; it explains, however, some of the unhappy consequences that accompany economic and social progress. Fortunately, human nature is equal to the new difficulties!; and though the progress of the last fifty years has brought with it the problem of the deficient members of society who cannot adjust themselves to their social environment, there has arisen a public spirit animating the more fortunate members of society to do their duty towards their less fortunate brethren. Everywhere there is evidence that this is so, and that at least the question of the care and education of mentally defective children is receiving earnest practical attention. London, Manchester, Birmingham, Glasgow, and other large centres of population are moving in the direction of providing special facilities for the care and training of such children. Whether the instruction of defective children requires to be carried on in specially equipped schools, separate as regards buildings from schools in which the ordinary standard work is carried on, is a question for the school boards to consider. The obvious objections to that method are the cost of separate buildings, and being limited in number, the distance at which the schools would be placed from the homes of the majority of the children.

But we would encourage school boards to try the experiment of having separate class-rooms in the ordinary schools rather than separate buildings; and we would say further, do not attempt too much in the way of purely educational training, because the aptitudes of mentally defective children are usually industrial and

musical rather than in the region of memory and reasoning. The practical difficulty of separating the imbecile child, who should be placed in an imbecile institution, from the mentally defective child, who can be taught in a special class and kept at home, is one which the experience of a medical man, specially qualified for the work, can best determine. Circumstances unconnected with the state of the child's mind may occasionally determine the question for the one form of training or the other. But after all has been done for those children that school boards can do, there will still be work for such associations as that for whose funds the Duchess of Sutherland pleads. The officials who have to administer the Poor Law, the Criminal Laws, and the Lunacy Laws ought to welcome the help of this and kindred associations in promoting the welfare of many adult deficients who come their way, and for whose care when out of their hands there exists no provision.

It is obvious that the ladies and gentlemen who are trying to awaken public interest in this matter are not only doing a needful and praiseworthy thing, but they are tackling a subject of wider relations than some of them may appreciate. Failure to appreciate their proper functions may lead them to adopt methods and encourage schemes which may overlap, and perhaps threaten the financial stability of existing institutions for the care of imbeciles and idiots. Illustration of this is to be found in the fact that the principal and secretary of the Royal Albert Asylum, Lancaster, has found it necessary in the interests of that institution to write a letter to the editor of the *Manchester Guardian* in order to make clear to the benevolent public of Manchester, who have been asked to give £20,000 for the erection of two institutions in Manchester for the housing and training of feeble-minded children, that the Royal Albert Asylum exists "for the care, education, and training of idiotic, imbecile, and weak-minded children and young persons." There is real danger that the public may fail to apprehend the difference between the existing imbecile institutions and the proposed new provision for backward and feeble-minded children, with the result that public support may be given indifferently to both classes of institutions, to the financial injury of both. It is due to the existing institutions that those who are promoting the new movement should clearly define the objects and limits of their scheme before setting up establishments and appealing for public support. The eloquent and suggestive speeches of the Duchess of Sutherland and Miss Dendy, made at a meeting at Manchester in support of the scheme for the building of two institutions in that city, show that the line of demarcation between their scheme and the work of imbecile institutions is quite clear and distinct to their minds. It should therefore be easy for them to make it clear to the public, and it is their duty to do so, because it may be assumed that the sympathy of their audience was gained by the thought being present to their minds that help was asked for imbeciles. We say so because we are not at all sure that public sympathy is ready waiting an outlet towards feeble-minded thieves, loafers, *et hoc genus;* and it is certainly not clear that the responsible authorities, whose business it is to punish criminals and prevent crime, are ready to back up the efforts of this new movement. The first task to be undertaken is educative; that is to say, educative of public opinion regarding the true nature of what may be called social inefficiency as a sign or symptom of some forms of mental weakness. How far it will be possible to apply the doctrines of degeneracy in a practical scheme which will meet the requirements of the case, and at the same time satisfy the juridical point of view, is the problem to be solved. Prevention, which is both easier and better than cure in most cases, is the ideal here; but it must not be forgotten that the majority of lifelong criminals begin their career of crime in youth, without, in many cases, manifesting signs of deficiency in childhood, and if this work is to be done well it must include the care of the juvenile and adolescent offender.

We welcome the scheme as an attempt to deal practically with a complicated and difficult problem that has been long enough in the region of mere discussion, and we hope that its promoters will successfully keep clear of the difficulties that lie in its way even at the threshold.

A "COLONY" FOR EPILEPTICS AND IMBECILES IN LANCASHIRE.

The Joint Asylum Committee of the Manchester and Chorlton Boards of Guardians have applied to the Local Government Board for sanction to the purchase of an estate near Chorley, known as the Anderton Hall estate, for the purpose of providing an asylum on the "colony" system for imbeciles and epileptics.

The committee recently appointed two of their number, Dr. Rhodes and Mr. Alderman McDougall, a deputation to visit Belgium, France, and Germany. These two gentlemen visited a large number of asylums, and had come to the conclusion, reinforced by the findings of their committee, that an asylum on the "colony" system was required. The Anderton Hall estate was found to be the most suitable for this purpose. It is pleasantly situated on a slope opposite Rivington Pike, above the Rivington reservoir. It contains 237 acres, could be purchased for £19,000, and was not more than twenty miles from the two unions; two railway stations were easily accessible from it.

The committee proposed that the asylum should be occupied by epileptics and imbeciles of the harmless class, of whom they had at present about 600 in the workhouses alone. The asylum would consist of a number of villas put up on different parts of the estate, and they would be placed away from the Rivington reservoir, so that if there were any surface drainage it would run in an opposite direction. Further, the committee proposed to lay down an intercepting sewer which would absolutely stop any possibility of contamination of the reservoir water.

SEWAGE DISPOSAL.

The coal filter briefly alluded to in the October number of the JOURNAL was first brought into prominence by Mr. Joseph Garfield, A.M.I.C.E., engineer of the Wolverhampton Sewage Outfall Works, who recommends that it should be constructed as follows:

The effluent drain-pipes are covered with a 6-inch layer of coal, about half-inch cubes in size. This layer is blinded with a little quarter-inch cube coal, above this comes a layer of twelve inches of coal, one-eighth inch cubes, and next a layer, three feet deep, of one-sixteenth cubes. The top course is a 6-inch layer of coal dust, which will pass a three-sixteenth inch mesh. This gives a total depth of five feet, and when circumstances will permit this is the minimum depth that should be used. It is unnecessary to have the filter tanks watertight, the effluent pipes being always open.

The sludge should be removed by precipitation or otherwise before the sewage is passed on to the filter. Charging the filter is effected by means of narrow metallic distributing channels placed on the surface at distances of about one foot apart. The sewage is turned on for twelve hours at the rate of about 200 gallons per square yard, and thus the filter works for twelve hours and rests a corresponding period in each day. Dr. Fosbroke, the county medical officer for Worcestershire, from whose report to his council (1) the foregoing description of the filter and its method of working has been taken, states that his "experience of the coal filter certainly brings me in full accord with the county medical officer for Staffordshire when he says 'the results obtained from these filters are highly satisfactory,' (and) on experimental data 'the preference must be given to the coal filter.'" In a lecture delivered by Dr. Reid, the county medical officer for Staffordshire, before the members of the Sanitary Inspectors' Association, he contrasts the results of experiments made with three descriptions of filters: (1) one composed of sand and gravel, specially constructed on Lowcock's principle; (2) a filter made up of coke breeze; and (3) a Garfield coal filter, in which the superiority of the last-named filter was considered to be satisfactorily demonstrated; and a table is given showing that while the Lowcock filter, though inferior to the Garfield, was still fairly satisfactory, the coke breeze filter was, to all intents and purposes, useless. "Coal," says Dr. Reid, "as a filtering medium is superior to gravel, and far superior to coke breeze;" and again, with reference to the Exeter septic tank method of purification, "from the first I looked upon this method with disfavour—notwithstanding the unanimity with

which engineers and others hastened to embrace it,—because it appeared to me to violate the great principle which hitherto had guided us, of keeping the sewage as free as possible from putrefactive changes previous to its application to the land or artificial filters. Up to the present time (February, 1898) I have not seen any analytical results from this—the septic tank—method of treatment which have caused me to modify my opinion, although I need not say that when such evidence is forthcoming I shall at once admit my error." It may be added that as late as a few weeks ago Dr. Reid had not changed the opinion which he had been led to form respecting the merits of the Garfield filter as contrasted with the results obtained by the system in use at Exeter. Mr. Garfield, in a letter dated August 27th, 1898, says in reply to an inquiry, "With reference to the sludge, I think that with domestic sewage a proportion of it can be got rid of by using a large-grain filter first; but before the sewage is run on to this it ought to be passed through a small settling or detritus tank to remove the heavy matter. Coal will be found the most suitable material for the large-grain filter also." In coal districts this filter will be found to be a simple and inexpensive way of dealing with domestic sewage, as no costly tank is required—in one case the ground has simply been excavated and the vacant space filled in with coal in the manner described; the filtering material will last for an indefinite period, the "royalty" asked for is a merely nominal one, and the effluent is such that the most exacting river pollution inspector cannot possibly object to its direct passage into a water channel.—J. B. S.

(1) Report upon sewage disposal, bacteriological filters (tanks).

THE TREATMENT OF IMBECILES AND EPILEPTICS.

The Local Government Board have sanctioned the acquisition of a large area of land by the Leicester Board of Guardians for the purposes of an experiment in the treatment of the imbeciles and epileptics now in the Leicester workhouse. The proposed new departure is the practical outcome of an inquiry instituted on the Continent by the Chorlton Board of Guardians, with the view of ascertaining the advantages of the method of treatment now adopted in Belgium and Germany.

SHOULD IMBECILES WORK?

This question arose at the meeting of the Chester Board of Guardians lately upon a letter from Dr. Kenyon, the medical officer of health, stating that it had come to his knowledge that some of the imbeciles at the workhouse were employed mowing grass and chopping sticks. He thought the use of hedge clippers, scythes, &c., by them was highly dangerous. The clerk stated that the workhouse master considered that it was very much better that the imbeciles should be employed in some way, but he would submit the doctor's question to the department in London and have the matter settled. He (the clerk) thought if any of the imbeciles were dangerous it was the duty of the medical officer specifically to point them out. The master said in November the medical officer wrote a note to him strictly prohibiting the imbeciles from working or using any tools that were dangerous to themselves and others. The men were kept indoors for a short time until they clamoured to go to work. The matter was placed before the house committee, and they unanimously decided that the imbeciles should be allowed to work in future.—Any further action was deferred pending the reply of the Local Government Board.

It is somewhat surprising that Dr. Kenyon should be so ignorant of the treatment of the insane as to raise a question of this kind. Dr. Weatherly complains of the prejudice and ignorance of the general public; but it would seem necessary to inaugurate a crusade of information by beginning to instruct those who pre-eminently should know something of our work.

MENTAL SUFFERING.

A case of an unusual character came before the Leicester borough magistrates lately, when a commercial traveller was charged with causing mental suffering to his four children by threatening and neglecting them. The prosecution was instituted by the Society for Preventing Cruelty to Children. The evidence showed that the defendant for three months had done no work, and had been almost continuously intoxicated. He threatened his children with violence, and the medical evidence showed that the children had suffered in their nervous system through fear on account of the threats of violence; but the defendant had never actually struck them, as they were protected by his wife. The Bench sentenced him to three months' imprisonment with hard labour.

We quote this as corroborative of Dr. Macdonald's position in regard to alcoholism as a cause of insanity, as reported in this number of the JOURNAL. In this case a drunkard subjects his family to privations and incalculable mental stress. We congratulate the Society for Preventing Cruelty to Children on their activity in the matter.

L'INTERMÉDIARE DES NEUROLOGISTES ET DES ALIENISTES.

We are favoured with the prospectus of a new journal which is to be printed in French, English, and German. It is designed to be a medium for the exchange of ideas on subjects connected with our department, principally in the form of notes and queries. The questions and answers are to be classed under the headings Neurology, Psychiatry, and Psycho-physiology. The most recent discoveries and theories will be recorded with references to original articles, and summaries of current knowledge will be published from time to time. The various congresses and meetings of learned societies in connection with these matters will be duly noticed in detail. We heartily commend this new departure, and hope that it will be widely supported by our readers. The subscription is only 7 fr. 50 per annum for the monthly issue, which will be published by Félix Alcan, 108, Boulevard Saint-Germain, Paris.

CORRESPONDENCE.

FROM DR. J. SANDERSON CHRISTISON.

The last issue of your esteemed JOURNAL contains what purports to be a "review" of my brochure, *Crime and Criminals*, and which contains such a sweeping condemnation and gross misrepresentation of my little book, that in justice both to myself and the readers of the JOURNAL I ask permission for a brief reply.

The "reviewer" first observes that it "is not a scientific work," while he in no way indicates that it is not, although he quotes two or three fragments of sentences which probably do not correspond with his views. He fails to observe what is stated in the preface, that the book was written for the general reader, and consequently the subject-matter is presented in a form and manner calculated to interest the public. He also says that it "is conceived in execrable American-English, and teems with slang words redolent of the Bowery;" but he fails to mention that the slang terms are quotations from the prisoners, and given as such to better indicate their meanings, which are often much easier understood than defined.

The "reviewer" flatly denies the truth of my statement that "crimes are now nearly five times as numerous as forty years ago," but he omits to say that I base the statement upon the official statistics of the United States, and thus refer to America only. I am aware that English statistics show a decrease of crime in late years. In America the ratio of incarcerated criminals to the general population was—for 1850, 1 to 3·442; 1860, 1 to 1·647; 1870, 1 to 1·171; 1880, 1 to ·850; 1890, 1 to ·757.

Dr. Paul Bartholow, of Philadelphia, has shown (*Journ. Amer. Medical Association*, November 14th, 1896) that homicides in the United States were nearly six times more in 1895 than in 1885. The foregoing are facts the public of America must attend to and intelligently deal with. The "reviewer" declares the book is "unnecessary," yet society and its machinery are chiefly responsible for the crime within it, and I know of no other book which presents typical cases of every-day offenders described in a way conducive to a better understanding by the public of the main factors in our criminal problem. And surely no one author can expect to reach the whole reading public. Medical psychologists do not make our laws.

So far, at the hands of "reviewers" my book has met with only commendation or tirade, and surely tirade is not criticism, nor even review. Let reviewers observe the golden rule, and be at least fair and honest. They have the *facts* before them, if they do not always have the requisite *understanding*.

[I have been favoured with the perusal of the above letter anent my review of Dr. Christison's book, *Crime and Criminals*, in the last number of the JOURNAL. Dr. Christison first quarrels with me for saying that his book "is not a scientific work," and then proceeds to admit the justice of the statement; ditto as regards the slang terms employed. As to the character of the English in which the text is conceived, a glance at the book itself will suffice to condone my use of the word "execrable." He next accuses me of "flatly denying" his statement that "crimes are nearly five times as numerous as forty years ago," whereas the words I used were "which we venture to doubt." As to the book being "unnecessary," that is only my opinion as reviewer. I must apologise to Dr. Christison for not having been able to take his book seriously, and for having treated it with a levity which he evidently considers undeserved. As I remain unable, after re-perusal of it, to modify my already expressed opinion, I must ask him to ascribe my want of appreciation to a lack of the "requisite understanding."—THE REVIEWER.]

THE LUNACY COMMISSION.

The retirement of Dr. Southey from the Lunacy Commission will be a source of regret to those members of our association who have had the best opportunity of knowing his worth, and the uniformly high ideas that he has maintained in the discharge of his duties. It is to be hoped that the onerous character of those duties, owing to the obvious and notorious understaffing of the Commission, has not had a share in leading to his retirement.

Dr. Sydney Coupland, who succeeds Dr. Southey, has a reputation both professional and individual that ensures his becoming a very successful member of the Commission. His long connection with the Middlesex Hospital has given him a very wide circle of friends, who regret the loss of his services to that institution, and who, we are informed, intend to express that regret in the practical form of a handsome testimonial.

OBITUARY.

JOHN BYWATER WARD.

John Bywater Ward, M.A., M.D.Cantab. Born March 18th, 1844; died October 3rd, 1898. Medical Superintendent and Secretary of the Warneford Asylum, Oxford.

Dr. Ward was a native of Leeds. He was the second son of Mr. William Sykes Ward, solicitor, of that city, and his wife Caroline, daughter of Mr. John Bywater, also of Leeds. In 1856 he entered the Leeds Grammar School, where he received the early part of his general education. On leaving the grammar school he became a student at the Leeds School of Medicine. He then entered at Caius College, Cambridge, as a Scholar, and graduated B.A. in 1867, taking a Second Class in Natural Science. He took the degree of M.B. in 1868, and became M.D. in 1872. He also held the diplomas of M.R.C.S.Eng., and L.S.A. His education being finished, Dr. Ward became one of the house surgeons to the Sheffield Infirmary, a post which he appears to have held for about two years. He then accepted a clinical clerkship at the West Riding Asylum under

the directorship of Dr. (now Sir) James Crichton Browne. At this time he contributed to the West Riding Asylum Reports a paper on the "Hypodermic Injection of Morphia in the Treatment of Insanity." He was next appointed Assistant Medical Officer to the Warwick County Asylum, under the late Dr. Parsey, as Medical Superintendent, and here he remained for four years.

On September 17th, 1872, Dr. Ward was elected to the conjoined offices of Medical Superintendent and Secretary of the Warneford Asylum, Oxford. Up to this date it had been a rule of the Warneford Asylum that the Medical Superintendent should be a married man at the time of his appointment, and that his wife should be matron. With the election of Dr. Ward, who was then a bachelor, a new departure was inaugurated, and a matron was appointed at the same time. In 1880 Dr. Ward married Miss Frances Toone, youngest daughter of William Wastneys Toone, Esq., of Landcote Grange, Yorkshire. In spite of much difficulty and suffering from chronic ill-health, Dr. Ward discharged his various and responsible duties, involving a great deal of clerical and financial work, with ability and success for twenty-five years. Under his direction the Warneford Asylum fully maintained its high character among the Registered Hospitals of England. An Assistant Medical Officer was added to the staff, and the building was twice enlarged. Between Dr. Ward and his Committee of Management the greatest harmony and good feeling existed during the entire period of his tenure of office. He retired at Michaelmas, 1897, on a pension of £400, willingly granted; and the Governors, in a special minute, recorded their appreciation of the valuable services he had rendered to the Warneford Asylum. On his retirement Dr. Ward settled with his family in Oxford, where he had purchased a house. But his health, always imperfect, gradually declined. An abscess formed in a kidney, and he sank thirty-six hours after an operation had been performed by Mr. Winkfield, surgeon to the Radcliffe Infirmary. He was attended also by Dr. Gray, Consulting Physician to the Warneford Asylum, and by Dr. Proudfoot of Oxford. He was buried in the churchyard of Cowley St. John, Oxford. Dr. Ward is survived by his widow and four children—two sons and two daughters.

W. R. Ancrum.

The death on October 9th of Dr. W. R. Ancrum, of St. Leonard's Court, Gloucester, at the age of eighty-two, deserves notice in the pages of this JOURNAL, for much of his work and time during the last thirty years of his life had been devoted to asylum administration. He had a successful career as a student of University College Hospital, as house surgeon of that hospital, as assistant to Mr. Liston, and as a practitioner both in this country and in South America. When he retired from the active pursuit of his profession he settled in Gloucestershire, and there his capacity for public work and his powers as an administrator were at once recognised. From the early sixties to within two years of his death he was associated with the management of the county infirmary, of the county asylum, and of Barnwood House Hospital for the Insane, and for many years he was chairman of the committees of these institutions. He left each of them more flourishing than he found it. He was a strong man, of sound judgment, keen discrimination, profound but regulated sympathy, and rigorously just in his dealings. He had in a high degree the capacity for entering into and sharing the enthusiasms of younger men, and it was this even more than his great qualities as an administrator which endeared Dr. Ancrum to the superintendents and other officers of the institutions with which he was connected.

Carlo Giacomini.

By the death of Professor Carlo Giacomini, of the University of Turin, Italy has lost one of her most illustrious sons. He was an indefatigable worker in anatomy, embryology, and anthropology. His works are well known, specially his *Guide to the Study of the Cerebral Convolutions* published some twenty years ago, and his *Anatomy of the Negro*, which throws light upon obscure points in evolution. Professor Giacomini's work on the *Brains of Microcephalics* is also worthy of remembrance.

NOTICES BY THE REGISTRAR.

Examination for the Nursing Certificate.

One hundred and forty-eight candidates applied for admission to the November examination for this certificate. Of this number 119 were successful, 11 failed to satisfy the examiners, 8 withdrew, and the results of the examination of 10 candidates from South Africa have not yet been received.

The following is a list of the successful candidates:

Kent County Asylum, Barming Heath, Maidstone.—Males: Thomas Edwin Cooper, Edgar Charles Foote. *Females:* Laura Barton, Edith Georgina Rebecca Darwin, Amelia Green, Elizabeth Harvey, Clara Peel, Alice Francis Amelia Rowe, Mary Louisa Rowe, Elizabeth Sharples.

County Asylum, Powick, Worcester.—Males: Albert Edward Bott, George Matthews.

County Asylum, Bodmin, Cornwall.—Males: Charles Bray, Thomas Robert Hards. *Females:* Edith Blight, Francis Helen Davey, Louisa Wilkinson.

County Asylum, Parkside, Macclesfield.—Males: Joseph Herman, William Muir. *Females:* Sarah Jane Baynham, Clara Elizabeth Cantrill, Margaret Ellen Hewitt, Martha Jane Jones, Mary Ellen Johnson, Blanche Vernon McLean, Gertrude Mellor, Emma Sharp.

County Asylum, Mickleover, Derby.—Females: Sarah Annette Brown, Rose May Daws, Sabina Foster, Hylda Gordon, Kate Reavill, Sarah Stretton. *Male:* Allen Robbins.

County Asylum, Thorpe, Norwich, Norfolk.—Males: William Arthur Newson, Alfred James Orchard, George Spalding, Walter Wilkinson, George Robert Whatley, William Walker Lishman. *Female:* Alice Maud Smith.

County Asylum, Hatton, Warwick.—Males: George Arthur Harrison, John William Owen, William Vincent.

North Riding Asylum, Clifton, York.—Males: John Cole, Joseph Denton, William Arthur Hill, Thomas Milnthorpe, Arthur William Parry, William Rigby, Frederick Waterhouse. *Females:* Jane Baxter, Clarissa Morrell, Ada Jane Parker, Caroline Potter, Mabel Bishop Simms.

County Asylum, Lancaster.—Females: Priscilla Huddart, Mary Hughes, Ada Holmes, Margaret Alice Harper, Eliza Remington, Edith Sharpe, Bertha Schüssler, Clara Thompson, Ellen Tyson.

County Asylum, Morpeth, Northumberland.—Females: Elizabeth Allen, Mary Murray, Winifred Pringle.

Borough Asylum, Ryhope, Sunderland.—Males: George Harrison, Thomas Noble, William Joseph Smith. *Females:* Annie Elizabeth Amelia Ayre, Margaret Brierley, Florence Hobbs.

Borough Asylum, Milton, Portsmouth.—Males: Thomas Edmonds, Walter Gubby, James Miller, Walter William Wellstead.

Holloway Sanatorium, Virginia Water, Surrey.—Males: George Foreman Beales, John Dickinson, John George Lufton Harries, Thomas William Maynard, Alfred Preston, Walter Marsden. *Females:* Sarah Jane Brereton, Lily Cutler, Adelaide Elston, Elizabeth Lyon, Marie More, Annie Munday.

The Retreat, York.—Female: Mary Hartas.

Midlothian and Peebles District Asylum, Rosslyn Castle, Edinburgh.—Males: Alexander M. Chisholm, John Henderson, John McHardy, James Turnbull. *Females:* Maggie Duncan, Mary McFadden.

District Asylum, Inverness.—Male: Angus Mackay. *Females:* Maria Wright Fraser, Margaret Knox.

District Asylum, Londonderry, Ireland.—Males: Thomas Kelly, John Lynch, James McMorris, William McMoyle, Hugh McGarvey, John McDaid, Charles McBride. *Females:* Elizabeth Christie, Joyce Anna Nixon, Bessie Nixon, Sarah Ann Wilson.

District Asylum, Mullingar, Westmeath, Ireland.—Males: Francis Murphy, John Pointon, George Rouse. *Females:* Kate Newton, Kate Nally, Bridget Shannon.

Private Nurses.—Females: Elizabeth Goodlet, Ada L. Middleton.

The following is a list of the questions which appeared on the paper:

1. What is an artery and what is a vein? What is the difference between the blood in an artery and the blood in a vein? 2. What bones form the thorax? What does it contain? 3. What is respiration? What changes take place in the blood and air during respiration? 4. What are the signs of fracture of a bone? What steps would you take for first aid to a patient who appeared to have broken his leg? 5. What precautions are to be observed by attendants in bathing patients? 6. How does a melancholic patient look, and how does he conduct himself? What things ought an attendant to observe and report about a melancholic patient? 7. What class of patients are most likely to choke at meals? What precautions would you take to prevent choking? What would you do for a patient who appeared to be choking? 8. What can be done to break a patient of the habit of picking sores in his skin? 9. What is meant by seclusion? What ought an attendant to do before secluding a patient? 10. What can an attendant do to help a sleepless patient to obtain sleep?

The next examination will be held on Monday, May 1st, 1899, and candidates are earnestly requested to send in their schedules, duly filled up, to the Registrar of the Association not later than Monday, April 3rd, 1899, as that will be the last day upon which, under the rules, applications for examination can be received.

Note.

As the names of some of the persons to whom the Nursing Certificate has been granted have been removed from the Register, employers are requested to refer to the Registrar, in order to ascertain if a particular name is still on the roll of the Association. In all inquiries the number of the Certificate should be given.

Examination for the Professional Certificate.

The following gentlemen were successful at the recent examination for the Certificate in Psychological Medicine held on December 15th, 1898:

Examined at *Bethlem Hospital*.—Dr. Thomas Gibson, Dr. Wilfred Brougham Warde.

Examined at the *Royal Asylum, Morningside, Edinburgh*.—Dr. George A. Rorie, Dr. James Muir Rutherford.

The following is a list of the questions which appeared on the paper:

1. What is meant by responsibility? State the ways in which alcoholic excess may affect responsibility. 2. What are the indications which would lead you to make use of the following drugs in the treatment of insanity: Sulphonal, trional, paraldehyde, hyoscine, chloralamide? What dangers may arise from their use? 3. Enumerate the forms of mental derangement associated with the puerperal state. Describe a typical case of puerperal mania and its treatment. 4. Distinguish between idiocy and imbecility. Mention the best known types of idiocy. 5. Describe a case of systematised insanity. 6. Describe the alterations in the cortical cells due to post-mortem change; also the alterations associated with the administration of certain poisons, and discuss the bearing of these various conditions upon the views hitherto entertained of the morbid anatomy of general paralysis.

The next examination for the Certificate in Psychological Medicine will be held in July, 1899.

The examination for the Gaskell Prize will take place at Bethlem Hospital, London, in the same month.

Due notice of the exact dates will appear in the medical papers.

The name of Dr. John Blackwood, who was successful at the examination for the Certificate in Psychological Medicine held on July 7th, 1898, at Bethlem Hospital, London, was accidentally omitted from the list published at page 859 of the October, 1898, number of the JOURNAL, and the names of Drs. Hamilton C. Marr, Alexander Keith Campbell, and George Stephen should have been given in the list of holders of the Medico-Psychological Certificate on page xxiii of the same number.

For further particulars respecting the various examinations of the Association, apply to the Registrar, Dr. Spence, Burntwood Asylum, near Lichfield.

THE PRIZE DISSERTATION.

Although the subjects for the essay in competition for the Bronze Medal and Prize of the Association are not limited to the following, in accordance with custom the President suggests—

1. On the anatomy and physiology of the superficial layer of the cerebral cortex in health and disease.

2. On the prevention and treatment of phthisis pulmonalis in asylums for the insane, with special reference to its frequency and causation.

3. On the evolution of asylum architecture, and the principles which ought to control modern construction.

The Dissertation for the Association Medal and Prize of Ten Guineas must be delivered to the Registrar, Dr. Spence, Burntwood Asylum, near Lichfield, before May 30th, 1899, from whom all particulars may be obtained.

By the rules of the Association the Medal and Prize are awarded to the author (if the Dissertation be of sufficient merit), being an Assistant Medical Officer of any Lunatic Asylum (public or private), or of any Lunatic Hospital in the United Kingdom. The author need not necessarily be a member of the Medico-Psychological Association.

NOTICES OF MEETINGS.

Medico-Psychological Association.

General Meeting.—At Chester on the 16th February.
South-Eastern Division.—At Chartham Asylum on the 5th April.
South-Western Division.—At Grand Pump Room Hotel, Bath, 18th April.
Northern Division.—At Hatton Asylum, Warwick, on 12th April.
Scottish Division.—At Glasgow on 9th March.

APPOINTMENTS.

A. N. Boycott, M.D.Lond., appointed Medical Superintendent to the Hertfordshire County Asylum, Hill End, St. Albans.

Sidney Coupland, M.D.Lond., appointed Commissioner in Lunacy for England.

Arthur N. Davis, L.R.C.P., L.R.C.S.Edin., appointed Medical Superintendent to the Devon County Asylum.

Dr. Peers MacLulich, B.A., M.B., Ch.B.Dublin, appointed Second Assistant Medical Officer to the Joint Counties Asylum, Carmarthen.

W. F. Menzies, M.D., B Sc.Edin., appointed Medical Superintendent to the Third Staffordshire Asylum, Cheddleton, near Leek.

Charles R. Scott, M.B.Edin., appointed Assistant Medical Officer to the Warneford Asylum, Oxford.

T. Goldie-Scot, M.B., C.M.Edin., M.R.C.S., L.R.C.P., appointed Assistant Medical Officer to the Royal Asylum, Glasgow.

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Part I.—Original Articles.

The New Inebriates Act. By A. WOOD RENTON, Barrister-at-Law.

AFTER many years of agitation and controversy, the first instalment of a much-needed reform of the law as to inebriates has been conceded by the Legislature. The aim of the present article is to subject the Inebriates Act, 1898, which came into operation on January 1st, 1899, to a somewhat minute and critical examination, in the hope at once of suggesting points for future amendment, and of throwing light on difficulties that may arise in its practical administration.

The Act divides itself roughly into two sets of provisions, which it is necessary to distinguish :

I. AMENDMENTS OF THE INEBRIATES ACTS, 1879 AND 1888.

II. NEW POWERS OF DEALING WITH CRIMINAL INEBRIATES.

We will deal with these classes in turn.

I. AMENDMENTS OF THE INEBRIATES ACTS, 1879 AND 1888.

(1) *No Powers of Compulsory Committal are given.*—The first point that calls for observation is that, in spite of the unanimous demand for them on the part of every Parliamentary committee that has inquired into the subject during the last quarter of a century, and of the licencees of the retreats established under

the Acts of 1879 and 1888, no powers for the compulsory committal of non-criminal inebriates to places of detention have been brought into existence by the new statute. It was not, indeed, expected that they would be; but it is important to emphasise once more the fact that the policy embodied in the Acts of 1879 and 1888 cannot be successfully carried out or developed until this defect in the law has been removed. It may be worth while to sum up in a few sentences the case for compulsory committal. Practically the whole body of expert opinion in the country is in its favour. The majority of inebriates cannot be induced to apply for their own committal; and the resolution of many of those who do so apply evaporates before the statutory formalities necessary to their admission to a retreat can be complied with. Moreover committals under the Acts of 1879 and 1888, where they are effected, are already, to a large extent, compulsory, since the friends of patients put upon them a moral pressure which they are unable to resist. Finally, compulsory committal has been tried with entirely successful results in America and on the Continent (cf. Kerr's *Inebriety*, second edition). Compulsory powers would be amply safeguarded against abuse by providing, as the Committee of 1893 suggested (c. 7008 A [8]), for an appeal to a divisional Court against any order made pursuant to the Act. What is further needed is a section like section 116 of the Lunacy Act, 1890, for the judicial application of the property of inebriates.

(2) *Most of the Minor Reforms of the Legislation of* 1879 *and* 1888 *which have been demanded are conceded.*—(*a*) *Duration of licence.*—There was considerable complaint (see first *Report of Inspector of Retreats*, 1881, c. 354, p. 1, par. 5) that the thirteen months' maximum duration of a licence under sect. 6 of the Act of 1879 was too short, on the ground that it both discouraged application for licences, and prevented licensees from laying out capital on the improvement of their retreats. The maximum duration is now two years (Act of 1898, s. 15).

(*b*) *Maximum period of voluntary detention.*—Under the Act of 1879 this was one year. In many cases that was felt to be too short a time to effect a cure, and the limit has now (Act of 1898, s. 16), in accordance with a recommendation of the Departmental Committee of 1893 (c. 7008 A [3]), and a clause in Lord Herschell's bill of 1894, been raised to two years. It will be noted, of course, that it is for the inebriate

at the time of the application to fix the limit of his detention. The statute only enlarges the possible limit.

(*c*) *Simplification of procedure.*—At quite a number of points the procedure under the Acts of 1879 and 1888 was unsatisfactory. Under the Act of 1879, applications for admission to retreats had to be attested by two justices *having jurisdiction under the Summary Jurisdiction Acts in the place where the matter requiring their cognizance arose.* The difficulty of finding two such justices was, however, an obstacle to the efficacy of the statute, and the requisition was repealed by sect. 3 of the Act of 1888. But even so the procedure was cumbrous, and the advocates of fresh legislation as to inebriates have contended that the attestation of a single justice should be sufficient. The 16th section of the Act of 1898 makes it so. Again, no facilities were afforded by the Acts of 1879 and 1888 for the extension of the term of a patient's detention, or for his readmission into a retreat. In either case the whole minuet of proceedings attendant on an original application had to be gone through. The new Act deals with this difficulty. Section 10 enables the extension or readmission to be effected "in like manner as an habitual drunkard may be admitted under section 10 of the Habitual Drunkards Act, 1879, as amended by section 4 of the Inebriates Act, 1888, and by this Act," the statutory declaration being dispensed with, and the attesting justice not being required to satisfy himself that the applicant is an habitual drunkard. The net result of this somewhat cumbersome provision is that extension or readmission may now be effected on the written application of the patient to the licensee, attested by a single justice : no statutory declaration by two witnesses that the applicant is an inebriate, and no inquiry by the attesting justice into the question, being necessary. Once more, the machinery in the Acts of 1879 and 1888 for dealing with cases of escape was singularly defective. Two distinct classes of escapes were dealt with—escapes from retreats, and escapes of patients during leave of absence from the persons in whose charge they were placed. The first defect in the old law was a curious *casus omissus.* Section 26 of the Act of 1879 provided for the apprehension of an habitual drunkard escaping either from a retreat or while absent on leave, on the warrant of "any justice or magistrate having jurisdiction in the place or district where he is found, or in the place or district where the retreat from

which he escaped is situate." It will be observed that from the wording of this section the warrant could only be issued in the case of an escape during absence on leave by a justice having jurisdiction in the place where the patient was found. Section 18, sub-section (2), of the Act of 1898 supplies this hiatus by enabling the warrant to be issued by any justice having jurisdiction in the place where the person in charge of the patient resides. Again, while the Act of 1879 provided that (section 21) where a licence for leave of absence was forfeited or revoked (and escape from a person in charge was an *ipso facto* ground of forfeiture [section 22]), the time during which such habitual drunkard was so absent from the retreat should be excluded in computing the time of his detention, there was no similar enactment in regard to patients, not absent on leave, escaping from retreats. Section 18, sub-section (1), of the Act of 1898 provides for the exclusion in such cases of the time between escape and return. It may be pointed out that there is some doubt, from the language used in section 21 of the Act of 1879, as to whether any time that may elapse between the escape and the recapture of a patient absent on leave is to be excluded in computing the term of his detention. Section 21 provides for the exclusion of "the time during which such habitual drunkard was *so absent* from the retreat." But a prior part of the section indicates that the words "so absent" mean "absent under licence," whereas, on escape, a licence is *ipso facto* forfeited (section 22), and therefore ceases to exist.

The point is fine, and possibly unsound; but in any subsequent legislation on the subject, any doubts in regard to it might be expressly negatived. Another hiatus in the Acts seems to call for passing mention. Section 22 of the Act of 1879 provides for the revocation of a licence by the Secretary of State, &c., and that "thereupon the habitual drunkard to whom the licence related shall return to the retreat." Probably a patient failing or refusing to return after such a revocation could be recaptured as an escaped patient under section 26. But the question might advantageously be settled by express enactment, definite provision being made, here again, for the exclusion of an interval between revocation and recapture in the computation of the time of detention.

There are more serious objections to be urged, however, against the law as to escapes as it still stands. In the first place,

while any officer, &c., of a retreat who induces or wilfully assists the escape of a patient is guilty of an offence against the Act under section 24, sub-section (2), such an escape does not appear to be an offence on the part of the patient. It ought to be made one. In the second place, although the licensees of retreats have long complained that the requirements of the section dealing with escapes (section 26)—the swearing of an information, the finding of a magistrate with jurisdiction, and the issue of a warrant—frequently occupy so much time that the escaped patient cannot be recaptured, no amendment of this unnecessarily intricate machinery has been effected.

Only three other amendments of the Act of 1879 are effected. The case of the death of a patient under licence—another hiatus in the Act of 1879—is covered by a section (Act of 1898, sect. 19) practically identical with section 27 of the Act of 1879, relating to the death of a patient actually detained in a retreat. The licensing authorities under the Acts of 1879 and 1888 were the borough justices in boroughs and the county justices in counties (Act of 1879, sect. 4, 5, Schedule I). Now they are the borough councils and county councils respectively; the clerk of the local authority being the town clerk in boroughs, and the clerk of the county council in counties (Act of 1898, sect. 13). A county council may delegate any of its powers as such local authority (*ibid.*). A county or borough council may contribute towards the establishment or maintenance of retreats, and any two or more may combine for such purpose (*ibid.*, sect. 14). Lastly, the Secretary of State is enabled to make arrangements with respect to (*a*) the procedure for admission, extension of the term of detention, or readmission; (*b*) medical or curative treatment, including (a very necessary provision) the enforcement of such work on patients as may be necessary for their health; (*c*) inspection of retreats; (*d*) other matters for carrying out the Acts (*ibid.*, sect. 20). Regulations made under this section are not to come into force till they have lain on the table of each House of Parliament for four weeks while that House is sitting, and therefore do not require publication under the Rules Publication Act, 1893, and the making of them and their date are to be notified in the *London Gazette* (*ibid.*, sect. 21).

II. New Powers of dealing with Criminal Ine-

BRIATES.—The Act provides for the establishment and recognition of two classes of reformatories :

1. *State Inebriate Reformatories.*
2. *Certified Inebriate Reformatories.*

Some of the provisions of the statute have special application to each of these separately. Others apply to both classes jointly. These provisions must now be noticed in turn.

1. *State Inebriate Reformatories.*—The Secretary of State is enabled to establish State Inebriate Reformatories, and for this purpose—with the approval of the Treasury—to acquire land and erect buildings, or appropriate the whole or any part of any buildings vested in him or under his control, and any expenses incurred by him in connection therewith are to be met "out of money provided by Parliament" (Act of 1898, sect. 3). Subject to regulations which the Secretary of State is empowered to make for the management of these reformatories, and for the classification and treatment of their inmates, and for absence on leave, the Prison Acts, 1865—1898, including the penal provisions of such Acts, apply to them. But no regulation (*semble* either by the Secretary of State or by the Prison Commissioners) is to authorise the infliction of corporal punishment in any State Inebriate Reformatory (Act of 1898, Sect. 4.) The Home Secretary has indicated in a recent circular letter to Judges, Chairmen of Quarter Sessions, and Recorders, that no State Inebriate Reformatory is to be established in England in the meantime.

2. *Certified Inebriate Reformatories — Applications.* — The Secretary of State is empowered, on the initiative of the council of any county or borough, or of any persons desirous of establishing an Inebriate Reformatory, to certify it as such if he is satisfied of the fitness of the proposed establishment, and of the applicants intending to maintain it (Act of 1898, sect. 5 [1]). The procedure on applications is now prescribed by model regulations made by the Secretary of State under sect. 5 (2). These regulations are referred to in this article as M. R. Applications for certificates are to be addressed to the Under Secretary of State, Home Office, Whitehall, and to give the following particulars :—(i) Name proposed for reformatory. (ii) Names of managers, corresponding secretary, and treasurer. (iii) Description and plan of site ; the land must be of healthy character, at some distance from large centres of population,

and must allow not less than one acre for every ten patients in the case of male reformatories, and half that quantity in the case of female. (iv) Full plans exhibiting (*a*) adequate and separate accommodation for dormitories, day-rooms, and workshops; (*b*) proper infirmary accommodation; (*c*) proper associated dormitories for healthy inmates. (v) Number—not less than twenty-five—of inmates proposed to be received. (vi) Sex: if different sexes are to be received, the buildings and grounds occupied by them must be absolutely separated. (vii) Whether inmates of certain classes only, *e. g.* of specified religious denominations or from specified localities. (viii) Rules: these should either incorporate or be based on the Model Regulations, and must be approved by the Secretary of State before any inmates are received, and the payment of the Treasury grant (*vide inf.*) is contingent on their observance. (ix) Names of superintendent (*vide inf.*), medical officer (*vide inf.*), and proposed staff. (x) Statement of proposed work for inmates, and arrangements as to individual training (M. R., App. X, 1). It should further be noted that an application for a certificate is to be deemed to be an undertaking on the part of the managers (*vide inf.*) to feed, clothe and maintain any person who may be committed to their care with their consent for the period of the sentence, subject to the regulations approved for their institution (M. R. 1 [6]); and further, that as no certificate can be granted till the site and plans have been approved, such approval should in every case be obtained before money is spent or contracts are entered into in connection with a new institution (*ibid.*, App. I). If the Secretary of State is satisfied on the points above indicated he may grant a certificate containing (M. R. 1 [2]) any conditions that he may prescribe, and such certificate is to remain in force until it is withdrawn or surrendered (*ibid.* 1 [3]). A certificate is not to be surrendered till the Secretary of State is satisfied that proper arrangements have been made for the disposal of the inmates (*ibid.*, 1 [5]). The grant, withdrawal, or surrender of a certificate is to be notified in the *London Gazette* (*ibid.*, 1 [4]).

The Managers.—The expression "managers" in relation to a certified inebriate reformatory means any persons having the management or control of the reformatory (Act of 1898, sect. 27). The duties of the managers in relation to applications for

certificates are stated under the heading "Applications," *sup.* Their other general duties are (i) to furnish the Secretary of State with a yearly statement of the receipts and expenditure of the reformatory in such form as may be (none has yet been) prescribed (M. R. 2); (ii) to acquaint the Secretary of State with any changes in the *personnel* of the staff (*ibid.*, 3); (iii) to make application quarterly to the Secretary of State for the Treasury grant, forwarding the necessary particulars of the number of inmates during the quarter, and the length of time each has been detained in the reformatory (*ibid.*, 5); (iv) to deal with the question whether application should be made to the county court under sect. 12 of the Act of 1898 (*vide inf.*); and (v) to deal with various questions of administration and discipline which are noticed incidentally under other headings.

The Superintendent.—The superintendent is to reside in the reformatory, and is not to be absent without due arrangements for the discharge of his duties having been made to the satisfaction of the managers (M. R. 6). He is to report to the Secretary of State the reception of every inmate, sending a copy of the commitment or order of court (*ibid.*, 7). He is to be responsible for the observance of the regulations and the proper conduct of the officers of the reformatory (*ibid.*, 8), and for communicating to inmates the regulations affecting them (*ibid.*, 13), and to carry out the rules as to the employment and industrial training of inmates (*ibid.*, 10). He is to keep and be responsible for a journal and such other books and records as may from time to time be prescribed (*ibid.*, 9). His duties as to inspection and visitation are (*a*) to inspect daily the whole reformatory, and see every inmate once in twenty-four hours (*ibid.*, 11); (*b*) to visit daily all inmates while employed at labour (*ibid.*, 11); and (*c*) to see that every inmate under punishment is visited during the day at intervals of not more than half an hour by the appointed officer (*ibid.*, 29). He is to take every precaution to prevent escapes (*ibid.*, 12 [1]) or fires (*ibid.*, 26), to assure himself that all gates are locked at the proper times, and that all the keys of the reformatory are in their proper places (*ibid.*, 12 [2]; and to pay attention to the ventilation, drainage, &c., of the reformatory (*ibid.*, 23). The superintendent is, further, to inform the managers or inspector (*vide inf.*) of the desire of any inmate to see them (*ibid.*, 28); to take care that no inmate is subjected to any punishment

without the approval of the medical officer (*ibid.*, 30); to assist in providing inmates with employment on their discharge, and in preventing them from falling again under the influence of drink (*ibid.*, 32). He may read every letter addressed to or written by an inmate, and may use his discretion in communicating to or withholding from an inmate at any time the contents of a letter addressed to such inmate—why should this latter provision not be extended, as in the Lunacy Acts (see sect. 41 [1] of the Lunacy Act, 1890) to letters written by an inmate to private correspondents?—noting every case of such withholding in his journal. All letters withheld are to be forwarded to the inspector (*ibid.*, 34). The superintendent is to inquire with respect to every inmate, on reception, whether he has any real and personal property more than sufficient to maintain his family, and to lay the result of his inquiries before the managers and the Secretary of State (*ibid.*, 34). As to consequential proceedings see *inf.* The superintendent is to (*a*) call the attention of the medical officer to any patient whose state of body or mind seems to require notice (*ibid.*, 14), or who is ill, —a daily list of sick inmates is to be furnished (*ibid.*, 15), and to carry into effect the written recommendation of the medical officer for the alteration of the discipline or treatment of any inmate (*ibid.*, 19), or for separating from the other inmates any inmate labouring or supposed to labour under any infectious, contagious, or mental disease (*ibid.*, 20), reporting forthwith to the inspector if in any case the recommendations of the medical officer are not carried out (*ibid.*, 21); (*b*) report without delay to the inspector the case of any patient as to whom the medical officer is of opinion that his life will be endangered by further detention, or that he is unfit totally and permanently for reformatory discipline, or that his mind is becoming impaired (*ibid.*, 18); (*c*) notify to relatives any case assuming in the medical officer's opinion a dangerous aspect (*ibid.*, 22); and (*d*) notify any case of death to the managers, the nearest relative, the coroner, and the Secretary of State (*ibid.*, 16), who is also to be furnished, if an inquest is held, with the finding of the jury and the facts elicited (*ibid.*, 17). Finally, the superintendent may examine all persons and vehicles going in or out of the reformatory, and may exclude any person who refuses to be examined (*ibid.*, 24); and may remove any visitor to the

reformatory or to an inmate whose conduct is objectionable, recording the fact in his journal.

The Medical Officer.—The medical officer is entrusted with the general care of the health of the inmates, and is to report to the managers and notify the superintendent of any circumstances requiring attention on medical grounds. These reports are to be shown to the inspector on his visits, and in cases of importance copies are to be transmitted to the inspector (M. R. 35). The medical officer is to visit the reformatory at least once every day, and every inmate at least twice a week (*ibid.*, 36). He is further required to visit (*a*) every day such inmates as complain of illness, reporting to the superintendent in writing as to their fitness for labour, and the sick in the infirmary (*ibid.*, 37); (*b*) every day, or oftener, any inmate under punishment to whom his attention is specially called (*ibid.*, 38); (*c*) at once any patient of whose illness he receives information (*ibid.*, 37). He is to examine every patient on reception, and to report the result to the Secretary of State (*ibid.*, 39); to examine washing places, &c. (*ibid.*, 40), and food, &c. (*ibid.*, 41), and report to the superintendent on any defect or insufficiency thereof, and to send accounts of cases and statistical records as required (*ibid.*, 42—44). The duties of the medical officer as to sick patients whose illness assumes a dangerous form, and in contagious cases and cases under punishment, have already been touched upon under the head of "The Superintendent," and see further M. R. 45—48.

In case of illness or other cause of necessary absence the medical officer is to appoint a substitute approved of by the managers (*ibid.*, 49).

The Inspector.—The Secretary of State is empowered, with the consent of the Treasury in writing, to appoint inspectors of certified inebriate reformatories, and assign to them such remuneration, out of money provided by Parliament, as the Treasury may determine (Act of 1898, sect. 7). In the meantime only one inspector—Dr. Branthwaite—has been appointed.

Officers of the Reformatory.—Every officer is to be a total abstainer (M. R. 50), and any officer who is to the slightest extent under the influence of drink whilst in the execution of his duty is to be liable on conviction to a fine not exceeding £20, or to imprisonment, with or without hard labour, for not

more than three months (*ibid.*, 60, v). Liability to a similar penalty is incurred by any officer who (i) mutinies or incites to mutiny ; (ii) violently assaults an inmate ; (iii) wilfully aids or permits an inmate to escape, or attempt to do so ; (iv) introduces or attempts to introduce intoxicating liquors into the reformatory (*ibid.*, 60, i—iv). No officer is to receive any gratuity for the admission of visitors or patients on any pretext whatever (*ibid.*, 31), or to strike a patient unless in self-defence (*ibid.*, 56), and then, as in any other case where the application of force is needful, with no more force than necessary (57), or to inflict any punishment or privation on any inmate unless ordered by the superintendent (*ibid.*, 58). Minor offences by officers are to be dealt with by the superintendent, under the orders of the manager (*ibid.*, 59). Female inmates—a provision borrowed from the Lunacy Acts—are in all cases to be attended to by female officers, and a male officer is not to enter a reformatory, or division of one, appropriated to females, except on duty, and accompanied by a female officer (*ibid.*, 32). It should further be noted under this head that every officer authorised in writing by the managers to carry an inebriate to or from a reformatory, or to arrest him in case of escape, is to have all the powers, protections, and privileges of a constable (Act of 1898, sect. 11 [1]) ; and that any patient escaping from a reformatory, or from the charge of the person in whose control he is placed under licence, may be apprehended without a warrant and brought back to the reformatory (*ibid.*, 11 [2]).

Admissions, Discharge, and Removal.—As the judicial machinery for the admission of patients to State Inebriate Reformatories and Certified Inebriate Reformatories is the same, it will be more conveniently considered hereafter when we come to deal with the provisions equally applicable to these two classes of institutions. Here we are concerned with special administrative details alone. Every inmate, on admission, is to be separately examined by the medical officer, as above noted (M. R. 63), and is to have a bath, unless the superintendent or medical officer otherwise directs (*ibid.*, 64) ; and if he is found to have any cutaneous disease, or to be infested with vermin, means are to be taken effectually to eradicate the same (*ibid.*, 65). Then follows a valuable provision, which has many analogues in American lunacy law. "Chronic invalids incapable of earning their own livelihood, and persons who

require special care and constant medical attention, or persons suffering from any contagious or infectious disease, should not be eligible for an inebriate reformatory. Persons suffering from any organic disease in an advanced stage are not fit subjects for admission; and in all cases of pulmonary tuberculosis special precautions should be taken to prevent the communication of the disease to others" (*ibid.*, 66). Every inmate may also be searched on admission or subsequently, and all prohibited articles are to be taken from him (*ibid.*, 61). All money or other effects brought into the reformatory by any inmate, or sent there for his use, which he is not allowed to retain, are to be placed in the custody of the superintendent, who is to keep an inventory of them in a separate book (*ibid.*, 62). No inmate is to be removed to any other reformatory or discharged without an examination by the medical officer; and prior to removal, or to the discharge at the expiration of his sentence, of a patient labouring under an acute or dangerous illness, the medical officer's certificate of fitness is necessary (*ibid.*, 67). Where a sentence expires on a Sunday, Christmas Day, or Good Friday, the discharge should be effected on the day preceding (*ibid.*, 68). Discharge on licence (a form is given in M. R., App. III; the licence should be granted by one or more of the managers on the recommendation of the superintendent and medical officer [M. R. 70]) should be possible after nine months' treatment, and the rule after twelve. If an inmate is not licensed at the end of a year, the matter is to be reported to the Secretary of State; if he is still in the reformatory at the end of eighteen months, there is to be a detailed report on the case. A temporary licence is to be given when any inmate is allowed to leave the reformatory for more than a few hours, either on business or on part of his probationary treatment (*ibid.*, 69). A copy of every licence is to be sent to the police of the district in which the inmate is about to reside (*ibid.*, 71).

Food.—The prescribed dietary will be found in M. R., App. IV, which contains not only the ordinary diet, but the diet for ill-conducted patients. No substantial alteration is to be made in it without previous notice to the inspector, and all deductions from it are to be recorded. A copy of the dietary is to be hung in the dining-room or other public place (M. R. 72). The medical officer alone may permit any special addition to the

food in the diet scale in the case of a patient not being an inmate of the infirmary (M. R. 74). The inmates of the reformatory are to mess together, and the food is to be canned in the room, and not weighed out to each man. An inmate who has any complaint to make on the diet must make his request to an officer deputed for the purpose as soon as possible after the diet is handed to him (M. R. 74). No intoxicating liquor or drug of any kind is to be admitted into the reformatory under any pretext whatever, except in pursuance of a written order of the medical officer specifying the quantity to be admitted, and the name of the name of the patient for whose use it is intended. This rule does not apply to the infirmary (M. R. 73).

Clothing.—Each inmate is to be provided with a complete and suitable dress, and required to wear it, unless there are special reasons to the contrary; however, a patient is to be allowed to use his own clothes if he desires (M. R. 76). There are further regulations imposed on patients—obligations as to cleanliness (*ibid.*, 77), baths (*ibid.*, 78), tidiness (*ibid.*, 79); "any inmate may, however, if and on such conditions as the managers approve, employ another inmate as a servant to relieve him from the performance of any unaccustomed tasks or offices" (*ibid.*); providing for the supply of sufficient clean bedding, with additions in cold weather or in special cases as the medical officer may deem requisite (*ibid.*, 80); and prohibiting inmates from receiving clothing, bedding, or necessaries other than the allowance, except with the permission of the medical officer (*ibid.*, 81). In the lunacy laws of several of the American States there is a provision that patients on discharge are to be supplied, if necessary, with clothing. It might be worthy of consideration whether a rule of this kind should not be incorporated in the regulations.

Employment of Inmates.—App. V of the M. R. contains a model time-table of reformatory regimen, which may be reproduced here, as it is quite short.

Rise at 6 a.m.; breakfast, 7 a.m.; physical drill (*no fixed time*); chapel, 8.15; work, 8.30 till 11.30, compulsory; dinner, 12 noon; work, 1.30 p.m. till 4.30, compulsory; tea, 5; recreation till bedtime; inmates to go to bed at 9.30 p.m., lights out in day-room; all lights out at 10 p.m.

It will be noticed that (unlike the dietary *sup.*) this is a

model, and not a prescribed form. Whatever time-table is adopted, however, is to be approved by the Secretary of State, exhibited in conspicuous places, and strictly adhered to—occasional variations with the consent of the inspector being permissible (M. R. 82). On Sunday, Christmas Day, Good Friday, and fast or thanksgiving days the labour of an inmate is to be confined to what is strictly necessary for the service of the reformatory. It would be well if express provision were made for relaxations in favour of Roman Catholics and Anglicans on other feast days than those above specified. A Roman Catholic or an Anglican cannot fairly be required to be engaged in "compulsory" work from 8.30 to 11.30 a.m. on say Ascension Day. Questions of this kind have occasioned considerable trouble in Board schools and workhouses during recent years, and there is all the less reason for any dubiety being left on the point that the rule above quoted is immediately followed by another (M. R. 84), that "an inmate who is a Jew shall not be compelled to labour on his sabbath, or on such days of festival as may be prescribed." Otherwise the regulations as to religious observances are of the usual character and quite unexceptionable (cf. M. R. 99—101): inmates are to be encouraged to do the kind of work, whatever it be, for which their training and capacity suit them ; an accurate account of the earnings is to be kept, and assignment of the sums to be allotted (1) for maintenance, (2) to the inmate for his own use, and (3) to the inmate's family or otherwise, is to be made in each case and notified to the inmate, who is to have a right of appeal to the Secretary of State. The scheme should specify what comforts (*e.g.* to have extra clothes, boots, &c.) may be purchased by an inmate from that part of the earnings assigned to himself (*ibid.*, 85). Provision is also made for chess, cards, &c. (M. R. 86), newspapers and magazines (*ibid.*, 87), drill and outdoor games (*ibid.*, 88), supply of books (*ibid.*, 89), and inmates are to be allowed to receive works or periodicals from their friends if the superintendent is satisfied that they are of an unobjectionable nature (*ibid.*, 90) and instructive (*ibid.*, 91).

Visits and Letters.—Visits to inmates are to be made within sight, but not (unless the superintendent orders it) within hearing of an officer (M. R. 92). The superintendent is to have power to remove from the premises (duly recording the fact in his

journal) any visitor exercising a bad influence over a patient, &c. (*ibid.*, 93). Permission may be given for Sunday visits in the case of friends who cannot come at other times (*ibid.*, 94). Facilities are to be given to patients for seeing legal and business visitors (*ibid.*, 95). The managers, when the circumstances allow of it, may permit female inmates to have their infant children with them (*ibid.*, 96). The powers of the superintendent as to letters have been noticed above (and see M. R. 97). Letters addressed to the Secretary of State or the inspector are to be forwarded unopened (*ibid.*). Inmates unless under punishment may receive and write letters as often as they desire, and receive a visit weekly, and the managers may allow any additional visits (*ibid.*, 98).

Mechanical Means of Restraint.— The strait-jacket alone is to be employed, and it is to be used only to prevent a patient from injuring himself or others. Particulars of every case of such use are to be entered in the superintendent's journal. Notice is to be given forthwith to the managers; and no inmate is to be kept under mechanical restraint without the approval of the medical officer except in urgent cases, nor for longer than the medical officer thinks necessary. Every patient so restrained is to be seen by an officer at least every half-hour (*ibid.*, 107).

Punishments.—These are of two kinds :

I. *Dietary or other Restrictions or Deprivations of Privileges* as set out in the rules (approved by the Secretary of State) for each reformatory (M. R. 102).—No such punishment is to be awarded except by the superintendent or the officer acting for him, nor until the accused has had an opportunity of hearing the charges and evidence against him, and of making his defence (*ibid.*). Dietary punishment is not to be inflicted on any inmate, nor is he to be placed in close confinement, unless on a certificate of the medical officer that he is fit to undergo it (*ibid.*, 106). The offences punishable in this way are disobedience (M. R. 103 [1]), disrespect to an officer (*ibid.*, 103 [2]), idleness (*ibid.*, 103 [3])—only, however, on a certificate by the medical officer of capacity to do the allotted work (*ibid.*, 106),—absence without leave from (*ibid.*, 103 [4]) or irreverence at (*ibid.*, 103 [5]) divine service or prayers, cursing (*ibid.*, 103 [6]) or indecency in language, act, or gesture (*ibid.*, 103 [7]), making objectionable noises, giving unnecessary trouble, or making repeated

groundless complaints (*ibid.*, 103 [8]), disfiguring or injuring any part of the reformatory or any article (*ibid.*, 103 [9]), committing any nuisance (*ibid.*, 103 [10]), possessing any prohibited article (*ibid.*, 103 [11]), in any way offending against good order (*ibid.*, 103 [12]), and attempting any of the foregoing offences.

II. *Punishment by a Court of Summary Jurisdiction.*—The offences for which this may be inflicted are mutiny or inciting thereto (M. R. 104 [1]) personal violence to an officer or servant or fellow-inmate (*ibid.*, 104 [2]), grossly offensive or threatening language to any officer or servant (*ibid.*, 104 [3]), wilfully or wantonly breaking windows, &c., in the reformatory (*ibid.*, 104 [4]), wilfully making serious disturbance while under punishment (*ibid.*, 104 [5]), gross misconduct or insubordination (*ibid.*, 104 [6]), escaping or attempting to escape or aiding an escape (*ibid.*, 104 [7]), introducing intoxicating liquors or drugs (*ibid.*, 104 [8]), entering a public-house or taking any intoxicating liquor (*ibid.*, 104 [9]), and serious or repeated offences under I, *sup.* (cf. 104, first par.). When any of these cases arise the superintendent is to report to the managers, who may (i) punish the offender by severer or longer continued restrictions in the reformatory, or (ii) prosecute before a court of summary jurisdiction. Punishment: maximum penalty of £20, or three months' imprisonment with or without hard labour. In lieu of or in addition to any punishment, the managers may apply to the Secretary of State to transfer the inmate to another certified or State reformatory.

The superintendent is to record details of punishments in the punishment book, and to remit them to the inspector for review. A supplementary Bill is to be passed this session dealing with the costs of prosecutions under these Rules.

The chief provisions applicable to both State and Certified Inebriate Reformatories are the following: a county court judge may order the recovery of expenses against the estate of an inebriate whose real or personal property is more than sufficient to maintain his family (section 12 [1]), on the application (*a*) in the case of a patient detained in a State Inebriate Reformatory, of a person authorised for the purpose by the Secretary of State, and (*b*) in the case of a patient detained in a Certified Inebriate Reformatory, of the managers or any two of them or of any authority contributing to the maintenance of such patient (section 12 [2]). This section

should be compared with sections 299, 300 of the Lunacy Act, 1890 (see Wood Renton on *Lunacy*, *ad loc.*; section 1 of the Poor Removal Act, 1846 [by which as amended by the Poor Removal Act, 1861, and the Union Chargeability Act, 1865, a status of irremovability is acquired by one year's residence in a parish, but it is provided that period of detention in a prison is not to count towards making up the year], is to apply to a person detained in or absent under licence from either a State Inebriate Reformatory or a Certified Inebriate Reformatory as if he were in prison [section 22]).

In addition to the provisions examined above, the Inebriates Act, 1898, creates fresh judicial powers for the treatment of criminal inebriates. The substance of the provisions is as follows:

(1) Any habitual drunkard admitted by himself to be such or found by the jury so to be, may, if he be convicted on indictment of an offence and the Court is satisfied that the offence was committed under the influence of drink or that drunkenness was a contributing cause of the offence, be ordered by the Court, in addition to or substitution for any other sentence, to be detained for a maximum period of three years in any State or Certified Inebriate Reformatory, the managers of which are willing to receive him (section 1). Any habitual drunkard who is found drunk in any public place or who commits an offence against the Licensing and similar Acts (the Scots Departmental Committee, to whose valuable report reference is made below, point out [p. viii E.] that the list does not include the very common offence of breach of the peace committed while in a state of intoxication), after having within twelve months been convicted at least three times of a similar offence "shall be liable upon conviction on indictment, or, if he consents to be dealt with summarily, on summary conviction to be similarly detained in any Certified Inebriate Reformatory" (section 2). As the Act of 1898 does not define "habitual drunkard," we are thrown back on the familiar definition in section 3 of the Act of 1879.

"A person who not being amenable to any jurisdiction in lunacy, is, notwithstanding, by reason of habitual intemperate drinking of intoxicating liquor, at times dangerous to himself or herself or incapable of managing himself or herself, and his or her affairs." The following brief extracts from the Home

Secretary's recent (see *Law Journal*, February 4th, 1899) circular letter to Judges, Chairmen of Quarter Sessions, and Recorders, shows the official view of the object and working of these important sections.

I may, perhaps, without impropriety, call to your mind that the system of reformatory treatment instituted by the new Act is designed by Parliament to replace the system of fines or short sentences of imprisonment which has hitherto been the only means possessed by Courts of Summary Jurisdiction for dealing with the offences of drunkenness set out in the first schedule of the Act, and which has been found so ineffectual in the case of confirmed drunkards. You will observe that under the Act you have power to order an inebriate qualified thereunder to be detained for as long a period as three years. There would appear to be a consensus of opinion among medical men and others experienced in the treatment of inebriates that in order to give a chance of effective operation to even the best designed method of reformatory treatment a considerable period of detention, amounting in most cases to at least a year, is essential. It is found that detention for short periods, such as three, six, or nine months, almost invariably proves ineffectual in securing the desired reformation.

It is accordingly anticipated that, save in very exceptional cases, it will not be deemed expedient to commit inebriates to reformatories for such short periods. You will observe that the regulations, which will be carried out under close Government inspection, provide that detention in those institutions shall not be of a punitive but entirely of a reformatory character, and that a system of licensing or probationary discharge will be brought into operation as early in each case as the circumstances will allow.

Accordingly, in view of the absence of all harshness, from the discipline to be maintained, there would seem to be no objection to committals, in appropriate cases, for the full period allowed by the Act. I am advised that the reformatory treatment to be carried on in the institution, followed, as it must be, by a term of probationary freedom under licence, cannot be successfully carried through under eighteen months to two years, even in favourable cases.

The other class of offenders who come within the reformatory provisions of the Act are persons convicted on indictment of an offence punishable with penal servitude or imprisonment, when the Court is satisfied that the offence was committed under the influence of drink or that drunkenness was a contributing cause of the offence, and when the jury finds that the offender is an habitual drunkard.

Such persons may be sent, for a term not exceeding three years, either to one of the certified rerfomatories already described, or to a State reformatory; and the committal to a reformatory may be either in addition to or in substitution for any other sentence.

In conclusion we must notice the adaptations of the Act of 1898 to Scotland and Ireland.

Scotland.—The provisions as to the committal of inebriates are adjusted to Scottish criminal procedure by sections 23 and 24. The Secretary for Scotland takes the place of the Secretary of State (section 25 [*a*]). The person vested with the title to any available poorhouse, may with the consent of the Scottish Secretary give the use of it for the purposes of an Inebriate Reformatory (*ibid.* [*b*]). For Prisons Acts, 1863—98, read Prisons (Scotland) Act, 1877 (*ibid.* [*c*]). For references to a borough and the borough council shall be substituted reference to a burgh and the town council thereof, "burgh" shall include

police burgh, and "town council" shall include burgh commissioners, and "town clerk" shall include clerk of the burgh commissioners (*ibid.* [*d*]). For the purpose of raising money by rate or loan in order to defray expenditure under this Act, county councils and town councils shall have the same powers as if a certified inebriate reformatory were a certified reformatory within the meaning of the Reformatory Schools Act, 1866 (*ibid.* [*e*]). The reference to the Poor Removal Act, 1846, shall not apply, but in any computation of time for the purpose of ascertaining the settlement of any pauper, the time during which he has been detained in an inebriate reformatory shall be reckoned as time spent by him as a prisoner (*ibid.* [*f*]). References to a county court judge mean to the sheriff, those to the coroner shall be construed as references to the procurator fiscal; and references to the *London Gazette* shall be construed as references to the *Edinburgh Gazette* (*ibid.* [*g*]).

The English Reports and Regulations should also be compared with the extremely valuable Report of the Departmental Committee appointed by the Secretary for Scotland to consider the Act from the Scottish point of view. The Committee consisted of Lord Overtoun, Mr. W. C. Dunbar, Lieutenant-Colonel McHardy, Mr. Dove Wilson, and Miss Flora Stevenson, and Dr. Clouston. In the main, the recommendations and draft rules are similar to, though much fuller than, those of recent English committees. The introductory report is a contribution of permanent value to the medico-legal literature of inebriety.

Ireland.—For Summary Jurisdiction Act, 1879, read Criminal Justice Act, 1855 (section 26 [*a*]). The establishment of State Inebriate Reformatories rests with the Lord Lieutenant, with the approval of the Treasury, and through the agency of the Prisons Board (*ibid.* [*b*]). Read for the Prisons Acts, 1865—98, the Prisons (Ireland) Acts, 1826—84 (*ibid.* [*d*]); for a borough—county borough, and for county council—council of a county borough (*ibid.* [*e*]); as to borrowing powers see *ibid.* (*f*); for *London Gazette*, *Dublin Gazette* (*ibid.* [*h*]). The Poor Removal Act, 1846, does not apply (*ibid.* [*i*]). Ireland was excluded from Sir Matthew White Ridley's Bill as printed on April 21st, 1898 (see Bill 187, clause 26).

A Case of Imperfect Porencephaly, reported by T. ALDOUS CLINCH, M.D., Pathologist, Durham County Asylum.[1]

A COMPLETE microscopical examination of the following case was made with the hope that new light might be thrown not only on the pathology of the disease itself but also on some of the disputed points of cerebral anatomy.

History.—The child, a male, was born after a long and tedious confinement, forceps being used finally, and the head much crushed and grazed by them. Till eleven months old development proceeded normally, but at this age, while being bathed one day, there were convulsive movements of the right side; from this time on, the right side was observed to be weaker than the left; for example, if when crawling he fell, he was unable to rise. He commenced to walk at the age of eighteen or nineteen months, about three or four months later than his brothers and sisters. He commenced to speak about the same age as they did, namely, when two years old. The next fit that was observed occurred when he was three years old; it was apparently purely of a tonic kind, and no clonic movements are described; it lasted for two or three hours, during which he was unconscious, afterwards he was weak and confused. He went on well till he was nine years old, when he had a *whirling* fit. Three months later the first fit of the ordinary kind occurred; they became more frequent till they amounted to several a week.

At the age of seventeen he was admitted to the Durham County Asylum on account of attacks of violent mania.

On admission.—Patient is an undersized lad with marked right hemiparesis; the arm is drawn to the side, the elbow subluxated and flexed, the forearm pronated, and the wrist and fingers flexed. The thigh is slightly flexed and adducted, the knee is also flexed slightly, and the ankle is extended. The affected side is colder and smaller than the other, and its movements are limited; for instance, if the patient uses his right hand at all it is only the two outer fingers, which he can move voluntarily; reflexes exaggerated.

Mentally he was epileptic, suicidal, and dangerous to others;

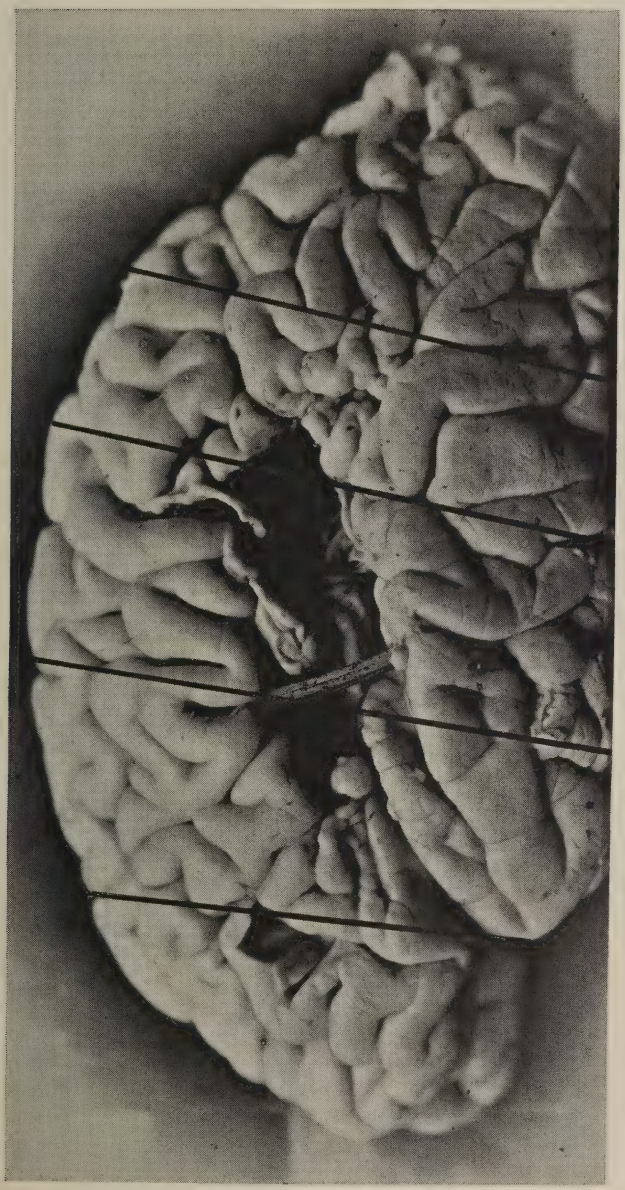


FIG. 1. $\frac{7}{8}$ nat. size.

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he could speak plainly and naturally, was able to write a little with the left hand; his intellect was that of a high grade imbecile.

Ten months after admission he suffered from status epilepticus of several hours' duration. Two years and a half after admission he died from typhoid fever.

Post-mortem Report.—Right lower limb, 71·5 cm. long; left, 73·5 cm. long. Right upper limb, 31 cm. long; left, 32 cm. long. Girth of right thigh, 29 cm.; left thigh, 32 cm. Girth of right upper arm, 21 cm.; left upper arm, 24 cm.

Head.—The *scalp* is thick; *skull-cap* thin and very asymmetrical (unfortunately I have no tracings). The right half is larger than the left, and the left thicker that the right.

Dura mater.—Nothing special; sinuses are empty. Pacchionian bodies well marked, adhering extensively to the dura. On removing this a very notable disproportion is seen between the two sides of the brain, the right side being the larger. On palpation this side has the ordinary consistence, while the left side is hardened. At the lower end of the fissure of Rolando, left side, is a translucent-looking patch in the membranes about the size of a sixpence, which is found to be part of the outer wall of a cyst of considerable size which lay in the corona radiata.

Around this cavity the convolutions were exceedingly atrophied, narrowed, and hardened (microgyria); they were the lower third of the two central gyri, the supra-marginal, and part of the angular and of the first temporo-sphenoidal gyri, the whole of the convolutions of the island of Reil (obliterated), and the posterior half of the third frontal, including Broca's convolution. The cavity was oblong, the long diameter from before backward 6 cm., transverse diameter 2 cm. There are a few imperfect cicatricial septa. The cavity was lined outside by the arachnoid and internally by the pia mater.

The soft membranes strip readily from both hemispheres. On separating the hemispheres the corpus callosum is seen to be small and atrophic, especially in its third (from before backwards) quarter; the fornix is found to be drawn over to the left so that its central part escapes division by the knife. Dissection of the right hemisphere reveals no recognisable deviations from the normal.

The cerebellum is symmetrical, each side weighing two and a half ounces. The crura, pons, medulla, and cord are all

smaller on the left side ; the spinal cord is smaller on the right. The other organs presented lesions characteristic of the end of the second stage of typhoid fever. Here it will be convenient to refer to a change in the cells of the cord which relates to the febrile disease and not to the nervous disease. These cells, whether stained by Nissl's method or hæmatoxylin in different ways, show none of the structure which is their normal characteristic. The stain is always diffuse. Unna's polychrome methylene blue method will be described in the next number of this JOURNAL.

The left hemisphere, crura, pons, medulla, and cord were hardened in formalin 10 per cent. Sections were made by the freezing method from several segments of the cord, but the other tissues were embedded in celloidin and cut on the sliding microtome.

Sections stained by hæmatoxylin and eosine, the Weigert-Pal method, Nissl's method, and the silver chrome method (modifications being employed as previously detailed). (2)

For magnification with high powers, small pieces of the left hemisphere were taken from the microgyres and from the more normal parts of the left hemisphere.

In the centres and frequently at the bases of these sclerosed gyri are cyst-like spaces of some size, though the walls, as a general rule, are but slightly separated.

These spaces contain delicate connective tissue of the ordinary type, and distended blood-vessels with thin walls. They have no lining membrane, but the connective tissue becomes dense, and is finally backed up by a close feltwork of neuroglia.

Dr. Campbell Clarke,(3) in 1879, published a case in which he described appearances which he thought proved the existence of intra-gyral systems ; and in the case before us there are appearances which bear a strong resemblance to Dr. Clarke's figures, but perhaps I shall not be accused of captiousness if I say that modern methods and instruments force one to a conclusion at variance with his. In a hæmatoxylin and eosine preparation these fibres take on the vigorous eosine stain of connective tissue ; they are coarser than axis-cylinders and more irregular in their appearance ; they show no myelin with the Weigert-Pal stain. They are arranged in coarse bundles, in a few instances appear to be continuous with the delicate tissue

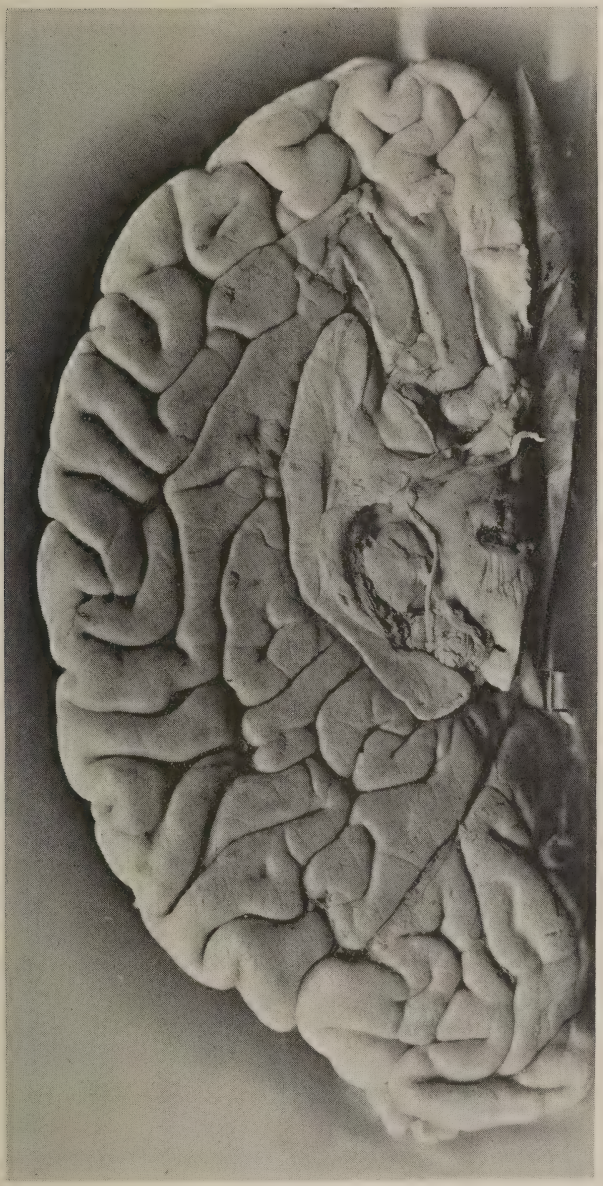


FIG. 2. $\frac{7}{8}$ nat. size.

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contained in the cystic spaces, the fibres as they pass into the space becoming more filmy and more loosely arranged. The bundles start a short distance from the surface, and course inwards or outwards, becoming rapidly smaller and then expanding again at the level of the cysts or on the surface of the convolution. When two or three are associated together there is a marked puckering of the convolution at that spot. At the commencement of each fibre is a nucleus, and this collection of nuclei and the peculiar shape of the bundle gives rise to a peculiar "wheat-sheaf" appearance. The general ground tissue consists of a close neuroglia network dotted with nuclei. Where these bundles are present I have never been able to find nerve-cells.

In an earlier stage of the sclerosis, the bundles of nerve-fibres passing from the cortex become looped, and produce an appearance like honeycomb; they are very delicate, and the myelin is collected in small droplets along the axis-cylinders. Where fibres pass to a band of more extreme sclerosis they become much coarser; the myelin is in large droplets at some distance apart; the coarseness of the fibres excels that of any others I have ever seen.

The progress of the disease appears to be as follows: the original attack, whatever its nature, has produced necrotic changes in the adjacent cortex; this has been invaded by cells from the pia mater or from the blood-vessels; these cells organising, contract and drag the nervous tissue where it still exists out of its proper course and relationships. This tissue gradually dies, and is replaced by true neuroglia or by the invading connective tissue. In time the connective tissue degenerates, and so cavity formation is produced. It may be mentioned that there are parts of this sclerosed cortex which show a gradual thinning out of the connective tissue, which begins to assume the characters of that in the spaces. It will readily be seen, therefore, that this is a process which differs altogether from the ordinary sclerosis of nervous tissue.

The silver chrome preparations show splendid neuroglia cells in the white matter, but a smaller proportion in the grey. The nerve-cells are very sparse, and are all fusiform and attenuated; their processes are few and devoid of thorns. I have never been able to trace the apical process into the first layer, and there appear to be no cells with an ascending cylinder

axis. In sections from the frontal lobe where the convolutions are not shrunken in appearance but are hard (as is the whole hemisphere), the neuroglia cells stain predominantly, and the nerve-cells are in the main fusiform, though a very few show the classical outline even if somewhat attenuated. Their basal processes are few and small and devoid of thorns. The apical processes have an appearance as if their tip had been sat on, and the process had as a result assumed an irregular spiral appearance.

Nissl and hæmatoxylin preparations show more cells of approximately normal appearance, but an enormous number of fusiform cells.

The left hemisphere having been hardened entire, was embedded in celloidin, and cut in a coronal direction from the occiput to the frontal region. A few sections were stained by hæmatoxylin, but the great bulk by the Weigert-Pal method. The sections as cut were placed in the mordant, and it is noteworthy that those stained in the first two months show much more accuracy in the details as demonstrated by high powers, than those stained later. After the sections were stained they were dehydrated, counterstained with eosin, cleared in a mixture of creosote and xylol (equal parts), and mounted in balsam. It was found that Weigert's mixture of xylol and phenol appreciably reduced the vigour of the hæmatoxylin stain. After some search the above mixture was found successful ; it does not attack celloidin, clears rapidly, but does not remove aniline dyes rapidly.

It was hoped, perhaps foolishly, that specimens prepared in this way would reveal tracts of sclerosis, and so perhaps throw light on some points of brain anatomy ; it must be confessed, however, that the results attained have not come up to expectation. The fresh brain was markedly hardened to the touch, and corresponding with this is found microscopically a diffuse sclerosis, in which certain bands of fibres stand out in marked relief, but whether more or less well marked than in a normal one my experience does not enable me to say. It will be best, perhaps, to take the different tracts as shown in the specimens, considering each briefly. (The method of description bears no relation to the direction of the nervous impulses.)

Tracts as seen in a Section in the Posterior Part of the Ascending Frontal Convolution.—From the vertex running in the plane

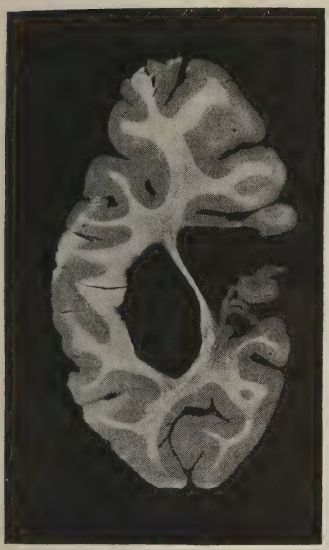


FIG. 3.

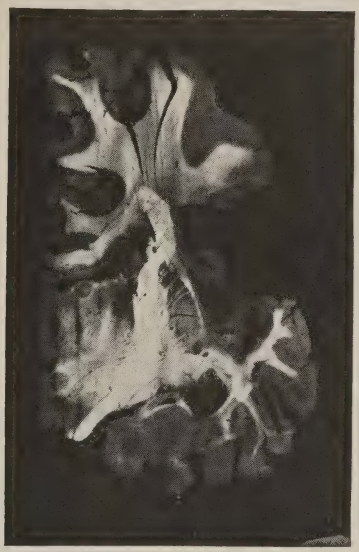


FIG. 4.

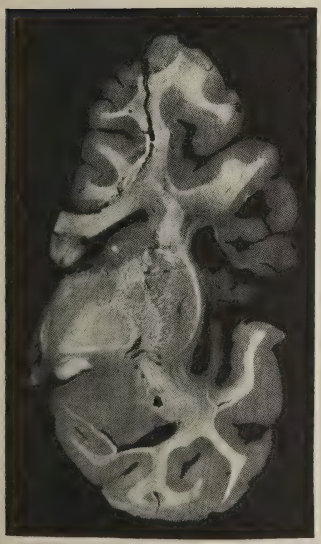


FIG. 5.

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FIG. 6.

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of the section, descending fibres pass downwards and forwards, gradually collecting together to form a well-marked bundle in the middle of the white matter (Tract A). This bundle just above the middle of the callosal gyrus meets another arched tract, to be described further on. A few fibres on both outer and inner side pass into this arched bundle, but the vast majority pass through it and appear on its under side. Here, not in bundles, but fibre by fibre, they turn sharply at right angles, and passing inwards and downwards, enter the corpus callosum. A few fibres relatively pass on and enter the plexiform nucleus (of Hamilton).(1) Homologous with these fibres are some which, starting from the convolution immediately above the "porus," or rather cavity, pass horizontally inwards, cutting the outer limb of the arched bundle, bend slightly downwards and then at right angles, and join the fibres of Tract A which enter the corpus callosum (Tract B). Parallel with Tract A is another (Tract C), which becomes better marked as we pass forward ; arising from the same area as the first, it passes to its outside, and after bending like an elbow into the base of the convolution from which Tract B originated, divides into two bundles, one of which passes into the internal capsule and is most marked anteriorly, while the other passes into the external capsule and is most marked posteriorly. Many of the fibres of this latter bundle can be traced into tracts which pierce the lenticular nucleus, and may possibly penetrate to the internal capsule.

The fibres from the internal capsule pass forwards and upwards, thus being cut obliquely (the plane of section being downwards and slightly forwards). The bundle inclines inwards till the centre of the white matter is reached, when, still getting smaller, it bends inwards and downwards, finally, at the level of the middle of the callosal convolution, almost disappearing as a distinct entity to the naked eye. A short distance further on it is met by the fibres of the corpus callosum. Both from its outer and inner surface fibres are given off freely, in an upward direction, to the general mass of white matter ; they can be distinguished from bundle A in that they are coursing forwards as well as upwards, their length visible in one section being correspondingly short. The mass of the fibres belonging to this tract, the crossed callosal of Hamilton,(1) are collected in bundles which interlace in so complex a manner that it is impossible from the microscopical sections (cut as in this case)

to say whether or not these bundles run from the internal capsule to the corpus callosum ; to the naked eye many apparently do so. At the level of the anterior end of the optic thalamus a small bundle of fibres (Tract E) is split off the issuing part of the internal capsule ; the majority of its fibres pass upwards, but a small proportion bend toward the main tract, curving round outside it and finally blending with it.

At the level of the genu corporis callosi, the crossed callosal tract is represented by a few fibres only, while the motor fibres mingled with it pass from its apex in a bundle parallel with Tract C. Anterior to the corpus callosum, these two tracts run in a sagittal direction forwards, their upper and lower fibres spraying off gradually to the adjacent convolutions.

From the corpus callosum comes a tract (D) of very fine fibres, which stain a brownish tint in contrast to the blue tint of the others; these fibres, which are distinctly medullated, pass beneath the bend of the crossed callosal tract among the fibres of Tract A (already turned at right angles) to the vertical part of the crossed callosal, where they bend obliquely downwards and mingle with its bundles ; characterised by their brown colour and their delicacy, they can be traced through them, and are seen to pass into the external capsule. That many fibres bend more and enter the internal capsule is very probable, but a definite statement to this effect cannot be made.

Areas of Sclerosis in the White Matter.—Immediately to the outer side of the vertical part of the crossed callosal tract is an area of sclerosis of triangular shape, which separates this crossed callosal tract from Tract C. Its upper horizontal border is formed by the horizontal fibres of Tract B. From this upper end extends far into the upper part of the hemisphere an area in which are no fibres with a vertical direction. It may be assumed, therefore, that this area (small in transverse section, but long in an antero-posterior direction) has interrupted fibres which pass from the external capsule to the upper and outer convolutions. In the external capsule are frequently small areas which are unstained in the Weigert-Pal preparations, and in which no nerve-cells can be seen in the hæmatoxylin ones, so that it may be assumed that these are also sclerotic areas, and not, as might possibly be thought, parts of the claustrum ; this structure appears to be either entirely undeveloped or entirely destroyed, for no traces of it are visible. In the

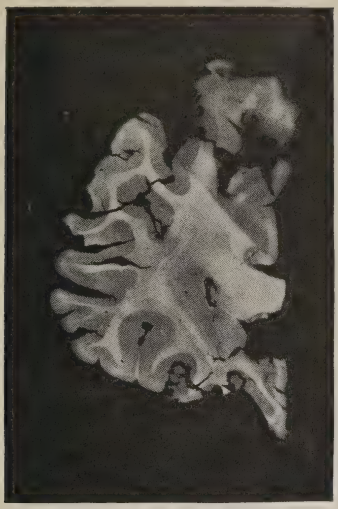


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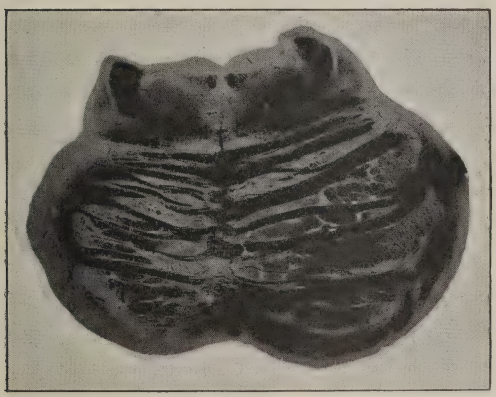


FIG. 13.



FIG. 14.

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basal ganglia no appearances worthy of special note were to be found.

The fornix, as has already been said, has been drawn over to the left side, and its left half is much smaller than its right. There is in it also excessive development of connective tissue. At its posterior end it is completely united to the corpus callosum, but anteriorly it is divided from it by a narrow band of connective tissue. Throughout its length vertical fibres pass freely from one to the other.

The sections through the crura and pons show an extremely marked asymmetry, which applies more or less to nearly all the structures, those in which it is least marked being the superior peduncles of the cerebellum, the nuclei and roots of the cranial nerves, and the posterior longitudinal bundles ; those in which it is most marked being the vertical fibres, both motor and sensory, and the transverse bundles.

In the medulla we find the same asymmetry, but here it is most severely marked in the pyramids, the left one being exceedingly small. At the internal angle of each pyramid is a small group of nerve-cells, which to some extent insinuate themselves between the adjacent fibres ; these nuclei, described variously as the pyramidal nuclei of Stilling or as the nuclei arcuati, are not described or mentioned in one prominent text-book at least. In the present case they are unequal in size, that on the left side being the larger ; we find in the spinal cord that the anterior horn on the smaller side (the right) is larger than its fellow.

In the spinal cord the asymmetry is much less obvious than in the parts already described ; it occupies the classical positions of the two pairs of pyramidal tracts, and in the crossed pyramidal tract can be traced the whole length of the cord, but in the direct only to the earlier dorsal.

The affected pyramidal tracts throughout their length show a slight degree of sclerosis, a fact in opposition apparently to those who consider the direct tract arises inferiorly to the cortex.(5) There is also in them a higher proportion of fine fibres ; as already said, the anterior horns are larger on the affected side, and counting over a number of sections, the cells there are found to be distinctly greater in number. The posterior columns are equal in size and normal in appearance.

General Conclusions.

I have no intention of making this case the text for a discussion on porencephaly, but merely to refer as briefly as possible to the principal points in connection with it. Those who wish to study the literature will find a very complete bibliography given with the case reported by Dr. Conolly Norman and Professor Alec Fraser.(6)

The Primary Pathological Condition.—The most frequent causes are hæmorrhage and arterial obstruction ; in favour of the former we have the conditions of his birth, the situation of the lesion, which, although over the area of distribution of the Sylvian artery, is not co-extensive with the whole artery or any one of its branches, the absence of cause for thrombosis or embolism, and its relatively greater frequency ; in favour of the latter is the onset of convulsions without an apoplectiform attack, and the delay in the appearance of the fits. If we accept hæmorrhage as the cause, then the moment of birth appears the most probable time for dating the injury, and I think the time of appearance of convulsions nine months later is not altogether incompatible with this idea. It may be noted that medullation of the pyramidal tracts in the cord is complete at birth, whereas higher up it is not complete till somewhat later. Now in all probability cicatricial processes in the cortex would prevent medullation of the tracts originating there, while the other cerebral tracts in communication with it, but not medullated till much later, would not be affected by the irritation till their structure was perfect. An excess of peripheral irritation, a shock in fact, is produced by a bath, and a spreading uncontrolled stimulation extends itself over the whole cortex.

Kundrat (7) pointed out that intra-uterine cases show a radial arrangement of the convolutions around the diseased area, and Gierlich showed that in infantile cerebral paralysis no secondary degeneration was found. In a case published by Drs. Wiglesworth and A. W. Campbell, (8) which was supposed to be due to traumatism at birth, there was very severe sclerosis of the pyramidal tracts of the cord, with none above the decussation ; and in another case published at the same time there was neither hemiatrophy nor hemisclerosis of the brain-stem, or

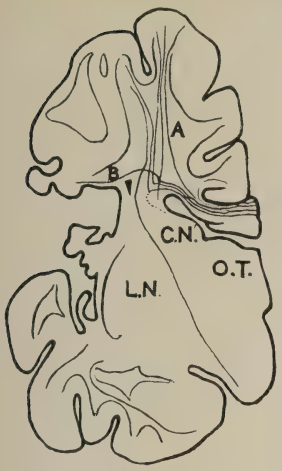


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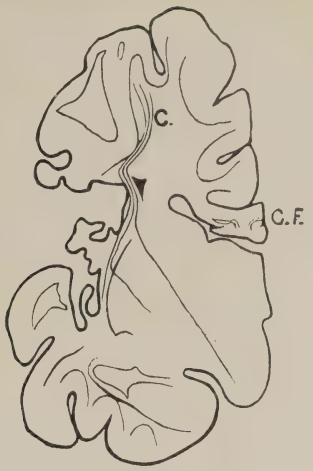


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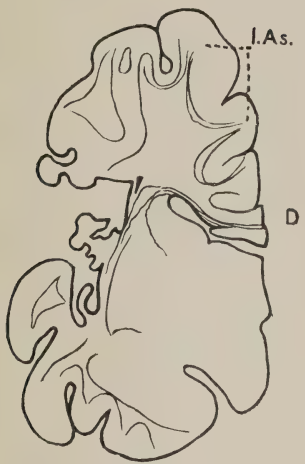


FIG. 10.



FIG. 11.

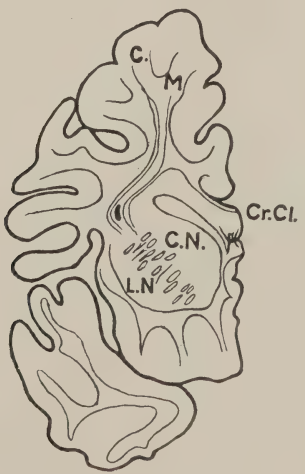


FIG. 12.

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cord, whilst the cerebellum was asymmetric. This case was probably partly due to developmental defect, and partly to softening (intra-uterine). Thus there may be several different results arising from closely allied conditions, and it would be injudicious to draw conclusions as to the date of injury to the brain from the state of the lower part.

The Crossed Callosal Tracts.—From the study of cases such as these it appears probable that in addition to the tracts ascending from the basal ganglia to the cortex of the opposite side through the corpus callosum, the existence of which has been proved by Ferrier and Turner, ([9]) there are other descending motor fibres that take this course. The histological examination has not definitely proved the existence of any large mass of these fibres, but many fibres can be seen which certainly give the impression that they take this course, though the direction of their impulses is of course unknown (the fibres passing from tract E round the crossed callosal of Hamilton, and finally mingling with it, for instance).

The corpus callosum in its third quarter is more atrophied than elsewhere, so perhaps one may associate this portion more especially with the area of disease.

The Spasm of the Affected Side.—Charcot formulated the theory that in ordinary hemiplegia occurring in the adult the cause of the late rigidity is the irritation of the motor tracts by the cicatrisation that occurs at the seat of lesion and extends along them. Others have shown that complete division of the cord causes loss of reflexes below the section, and that not till some time after are they regained, when they become exaggerated. In our case (as is usual in such cases) we are confronted by spasm of the vaso-motor as well as of the voluntary muscles, together with lowered nutrition, though the degree of sclerosis is very slight; in other cases the same conditions occur and yet no sclerosis at all is present. If, as is more than probable, the few cortical fibres that reach the cord come from parts of the hemisphere not directly affected, there is little reason for supposing irritation of importance passes from the cerebrum to the cord, and we must fall back on the theory that the spastic condition is the result of over-action of the cells of the anterior cornu unrestrained by inhibiting cortical influences. It may be said the whole cortex is sclerosed to a greater or less extent, and this is true in this case, but not in all, and not in

this in its earlier stages, when the conditions referred to were already marked.

(1) Read at the Annual Meeting of the Association, Edinburgh, July, 1898.—(2) "A Case of Chorea Gravis," *Journ. Ment. Sci.*, Oct., 1898.—(3) "A Detached Left Occipital Lobe and other Abnormalities in the Brain of a Hydrocephalic Imbecile," by A. Campbell Clarke, M.B., *Journ. Ment. Sci.*, Oct., 1879, xxv.—(4) "Remarks on the Conducting Paths between the Cortex of the Brain and the Lower Centres," by D. J. Hamilton, M.D., *Brit. Med. Journ.*, 1887, vol. i, p. 493.—(5) "On the Tracts of the Spinal Cord and their Degenerations," by A. W. Campbell, M.D., *Brain*, No. 80, vol. xx.—(6) "A Case of Porencephaly," by Conolly Norman, F.R.C.P.I., and Prof. Alex. Fraser, *Journ. Ment. Sci.*, Oct., 1894.—(7) *Die Porencephalie, eine anatomische Studie*, Graz, 1882, by Kundrat.—(8) "Two Cases of Porencephaly," by J. Wiglesworth, M.D., *Brain*, Nos. 77 and 78, vol. xx.—(9) "An Experimental Research upon Cerebro-cortical Afferent and Efferent Tracts," by D. Ferrier, M.D., F.R.S., and W. A. Turner, M.D., F.R.C.P., *Phil. Trans. Roy. Soc.*, 1898.

Illustrations.

1.—External view of left hemisphere (membranes stripped). Natural size.

2.—Internal view of left hemisphere (membranes stripped). Natural size.

The lines indicate the original pieces into which the brain was cut, and also the general direction of the sections.

3.—Section from the occipital region posterior to the corpus callosum (through the middle of the second piece).

4.—Through the middle of the internal capsule and crus, showing an apparent crossed callosal tract very strongly marked (through the middle of the third piece).

5.—Through the anterior part of the optic thalamus. The apparent crossed callosal tract is now much smaller, and beneath it can be seen the fibres described as tract D in the text (through the anterior part of the third piece).

6.—Section immediately posterior to the foramen of Monro, showing tract C as a well-marked bundle.

7.—Through the genu corporis callosi, showing the two tracts running forwards (C and motor tract M).

Figs. 3, 4, 5, and 6 show the sections as seen from before backwards. Fig. 7 shows the section from behind forwards. These figures are all taken from the actual specimen by direct contact. They show the cavitation which has occurred in the sclerosed gyri with distinctness.

8—12.—Diagrams showing the various tracts as described in the text. The lettering corresponds with that. In addition: M. = motor fibres; I.As. = intra-gyral association fibres; Cr.Cl. = crossed callosal tract; A.P. = ansa peduncularis; C.F. = fibres passing between the corpus callosum and the fornix; L.N. = Lenticular nucleus; C.N. = caudate nucleus; O.T. = optic thalamus.

13.—Section through the pons. × 2.

14.— ,, the medulla oblongata. × 2.

15.— ,, the spinal cord, cervical region. × 2.

16.— ,, ,, lower lumbar region. × 3.

17.— ,, ,, ,, sacral region. × 3.

In Fig. 15 the crossed pyramidal tract is readily seen to be lightly sclerosed on the atrophied side. The direct tract is atrophied, especially posteriorly, where it is best marked in this part of the cord.

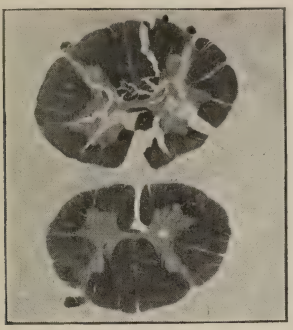


FIG. 15.

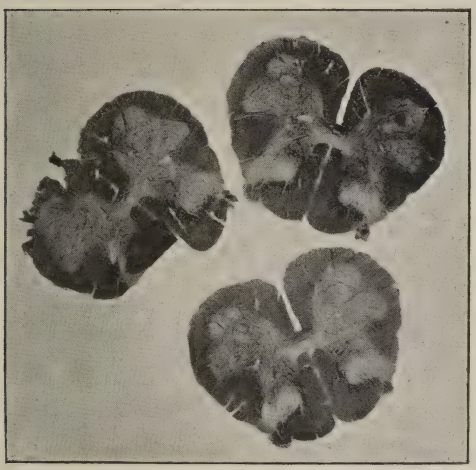


FIG. 16.

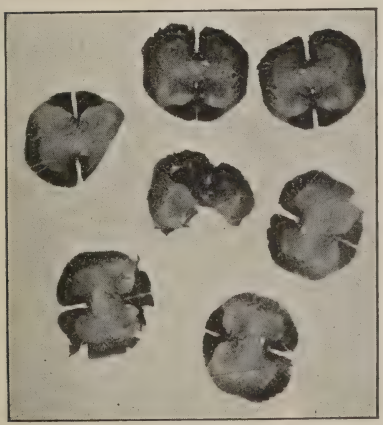
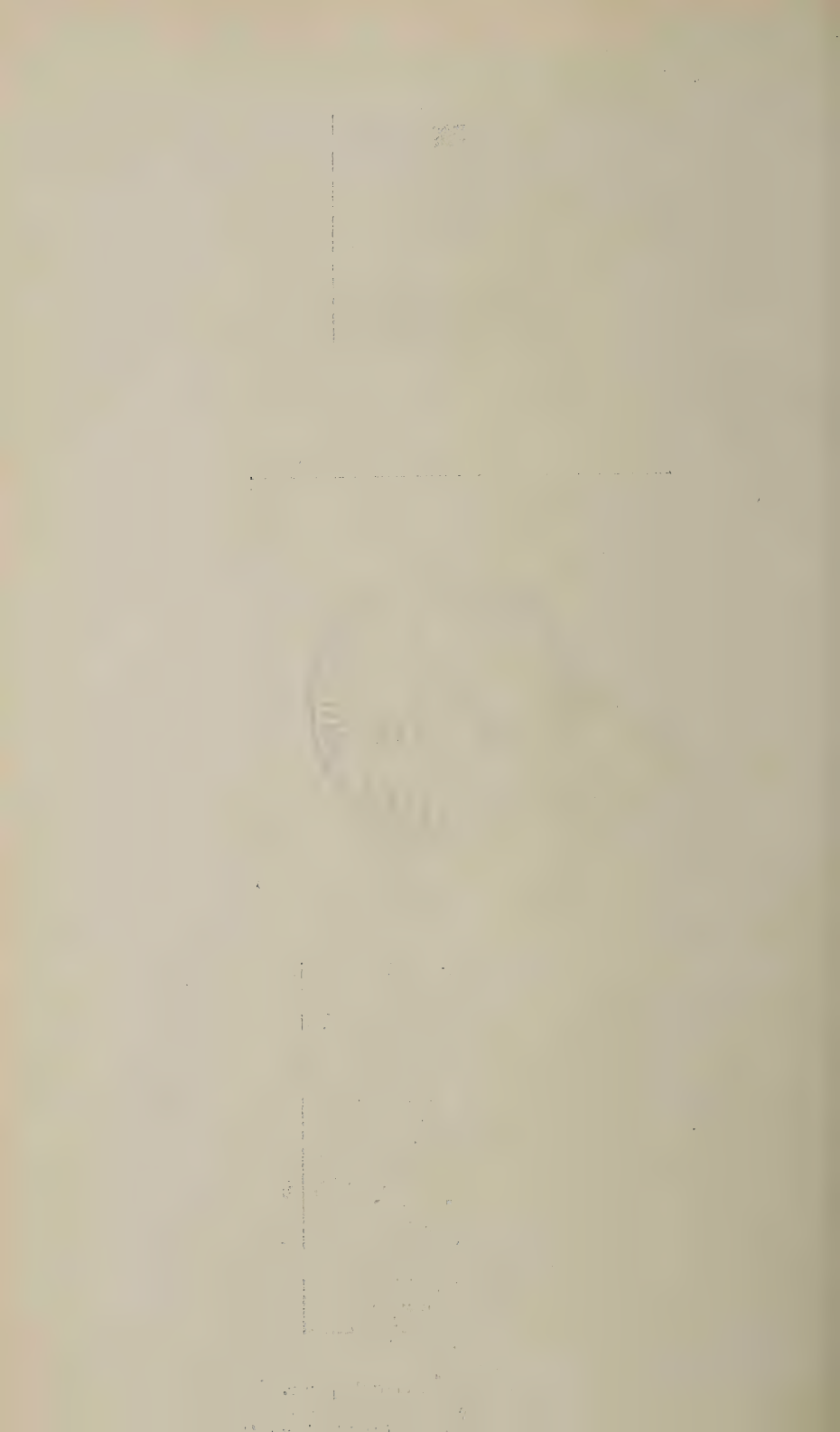


FIG. 17.

To illustrate Dr. ALDOUS CLINCH's paper.

Bale & Danielsson, Ltd., London.



On the Bases and Possibilities of a Scientific Psychology and Classification in Mental Disease.

By W. Lloyd Andriezen, M.D.Lond.

Part I.

Since the middle of the nineteenth century psychology has gradually come to be recognised as a branch of biological science. This is due to the influence of the works of Darwin and Herbert Spencer, of the Clinical and Neurological School of Meynert, Golgi, Cajal, Flechsig, and others, and recent developments in the Psychometric School of Fechner and Wundt on the other. The Alienistic School can render powerful aid to this movement; and though there are indications of the current in the proper direction, as shown more particularly in the work of Mercier (1) and Bevan Lewis (2), the end, however, cannot as yet be said to have been achieved, nor the movement to have become general. Psychology still lingers on the borderland of metaphysics; it has not yet been established on the firm rock of natural science. And while it thus lingers progress in knowledge is slow and restricted.

Consciousness generally.—Of consciousness in the abstract, and apart from the individual being or organism which manifests (and experiences) it, we know nothing. It is a subject for metaphysical speculation, and is transcendental. Griesinger well said that "the pathway to psychiatry is not through the dark portals of metaphysics."

Consciousness in the *widest* sense (3) may be spoken of as an endowment of the entire living organism, and therefore specifically associated also with its several parts; in the *stricter* sense we shall, however, find that in accordance with the principle of differentiation of structure and division of labour, which is such a striking feature throughout the living world, its special seat is in, and its manifestations proceed from, the nervous system.

The Seat of Consciousness.—For if there be any special organ (or organs) of consciousness in the organism, clearly it must be in (and must constitute) a region (*a*) *in which* all impressions from the environment, acting on the organism, would arrive and be duly received; it would also be a region (*b*) *from which* out-

going stimuli or responses would start (in response to the previously received impressions), to bring about or determine appropriate reactions of the organism. Further, it must of necessity be (at least in all the higher animals whose life is more than ephemeral) a region (*c*) *in which the returning cycle of impressions* from those parts of the organism which have reacted, or are still reacting, would arrive and be also registered ; so that the central organ is now made conscious or aware of the fact that the appropriate reactions have been or are being accomplished. These facts further necessitate various complex centres and pathways which must of necessity subserve the above outlined complex activities of the organism, and point to the fact that fundamentally the constitution of the whole organ of consciousness must be (in its simplest form) three-fold.

Its Constitution and Complexity.—Such is the simplest and yet most comprehensive way of regarding the organ of consciousness ; and this exists in the central nervous system, which is the aggregate organ and centre of consciousness—the central feeling-and-responding mechanism of the entire organism. Further anatomical and pysiological evidences need not detain us. The fundamental fact being established, it remains for us to study the *phenomena* of consciousness—the work of psychology.

Methods of Study.—(*a*) *Self-observation.* This includes introspection, individual experience, and auto-experimentation. (*b*) Observations and studies on our fellows in healthy conditions and the normal state (*normal psychology*). Such observations, to be of real value, must take into account differences of age, temperament, race, and social environment. (*c*) The special study, observation, life-history, and collateral investigation of those who are the subjects of mental (psychical) diseases, disorders, and alienations generally (*psycho-pathology*). (*d*) Systematic observations on the growth, development, and other phases (including all impulses, passions, instincts, propensities, &c.) of the mind and life of infants and children, and including pubescents and adolescents of both sexes (*psycho-genesis*). An adequate and consistent psychology must take into account all these four methods and sources of knowledge.

When data from these sources are carefully and critically gathered, collated, studied, and formulated into generalisations

or "laws," then psychology is raised to the dignity and worth of a science; otherwise it is a mass of empiricisms, a labyrinth of confusion.

The Older Belief (Metaphysical).—Early psychologists spent their time in discussing the nature of the soul, of spirit, and their relation to the body. The mind was by some regarded as a *portion* of the soul; others held that the two were one and indivisible; some, however, postulated a higher essence or entity within the soul itself—the spirit. Such conceptions were natural to the childhood of the world. Death focussed the popular mind upon the unknown. Men saw that in death—unlike in sleep, where breathing was still maintained—the corpse ceased to breathe, and became cold and stiff, and that it finally decomposed and disintegrated. What more probable than that the *breath was the soul, or animating principle, or essence of life;* and that the condition of death was simply the departure of this caged breath?(4)

Crude Theories of Soul.—This crude naturalism is an indication of the simple and primitive type of knowledge and creed of early man. At such times no differentiation, or only a slight differentiation, could be drawn between his conception of the air he breathed and the soul which inhabited his body. At first, therefore, the soul was considered to be a gas or rarefied air. But after a time air was not rare enough to suit the philosophers. Soon they dethroned air, and set up fire: the soul was an internal fire, the source of bodily heat. When it departed the body became cold in death.

Dualism as an Explanation.—For Anaxagoras neither air nor fire was subtle enough. He cast both aside, and postulated something entirely different, something with negative characteristics: the soul was immaterial. Thus dualism arose.

These were necessary phases in the evolution of man. But dualism did not long remain unchallenged; the rival theory of monism arose, and was put forward to reconcile the antagonism thus raised by the dualists between the material body and the immaterial soul. The monists merged the two apparently irreconcilable opposites in a higher unity of a still more transcendental kind: thus arose the monistic school, which culminated in the philosophy of Hegel(5) at the close of the eighteenth century. Both theories remain with us to-day.

The Scientific Method.—Psychology must turn its back upon

all such subtleties, which lead us only into perplexity. Suffice it for us that psychology observes, and studies, and treats of certain special phenomena, embracing a vast extent of the known. If we still use the words "soul" and "mind," we may do so in a definite and scientific sense. But such adaptation of terms to newer and clearer meaning should, however, be made only when there is need, and consistently with established knowledge. We shall have occasion to use the terms *mind* and *psychical:* these will require some explanation.

Just as some phenomena which we observe in nature are called *physical*, others *chemical*, &c., so a certain class of phenomena—exhibited by living organisms—are called *vital*. A further section of living beings exhibit during life certain other phenomena yet more complex, which we designate *mental* or *psychical*. So far, and as descriptive titles, these terms are convenient and useful. But many writers in the past have gone beyond this. Not content with studying, observing, and describing the course, development, association, and sequence of various phenomena in the world, they have postulated subtle essences to explain (crudely, in fact) their occurrence: thus heat was due to a subtle essence or substance called "caloric;" light was due to exceedingly fine "corpuscles" (the emission theory) which issued from luminous bodies, and constituted the real essence of light. Similarly the alchemists postulated "spirits," or "essences," to explain the different properties and behaviours of chemical substances. Similarly for the phenomena of life, growth, and movement which living beings exhibited: a subtle immaterial essence, the vital element or principle of life, was invoked to explain and account for these phenomena (6).

In the following pages, however, the use of the words physical, chemical, vital, mental, psychical, &c., will not postulate or connote the existence of any special undefined or undefinable essences as underlying phenomena. These terms will be used as merely descriptive. It is not necessary, then, to discard these terms, or to coin new ones.

Mental or psychical phenomena are, to speak accurately, a certain *special* class of functions which living beings may exhibit, and which have their special seat in the nervous system. Or, to put it in other words—as we have stated it elsewhere (7),—"mind is a brain function which is found in nearly all animals in varying degrees; which in man arises from small beginnings

like any other function, then gradually develops and attains the acme of its complexity and activity in adult life, and finally fails and disappears with the decay of old age." This is the basis and foundation on which the following studies will be built.

Part II.

The various steps in the evolution of consciousness in the organism (or in the race) are not so clearly defined and well marked as to be obvious to superficial examination. Often the progress is gradual and the time is prolonged; moreover the rate is not uniform, but marked by apparent halts, "crises," and periods of slow and rapid evolution. At times, again, we see what are obviously defects, anomalies, and perversions, rise into being under the influence of noxious conditions of the environment, or of vicious ancestry, as in the morbid types of mind and conduct which belong to the various species of idiocies (aphrenia), imbecilities (oligophrenia), "degenerative insanities" (paraphrenia), and acquired insanities (prenopathies).

Feeling as the Fundamental Element.—The first stages of development are now to be inquired into; and here the bulk of the evidence is derived from biological investigation of the simplest living forms of plant and animal life, viz. unicellular organisms. In the lower forms of unicellular organisms (*Protozoa*, protophyta, spermatozoa, antherizooids, leucocytes) all microscopic research has so far failed to demonstrate the presence of definite or distinct nervous structures. In them one and the same cell body is able to react and respond in different ways to objects, to incidental stimuli, and to varying conditions of the environment generally. Special researches, directed with a view to elucidate these phenomena, have resulted in showing that apparently simple physical agencies (*e.g.* contact), heat and light, and the presence of certain chemical substances (liquid or in solution) in the medium may determine definite and separate movements and responses of the living cell thereto; and these phenomena have been for convenience of terminology grouped under such categories as *chemiotaxis*, *thermotaxis*, *heliotropism*, *geotropism*, &c. [The student who wishes to pursue this subject further should consult the chapters of Romanes' *Mental Evolution in Animals*, and the works of Binet (8) and Max Verworn (9)]. This power,

therefore, of being (*a*) sensitive to different incidental stimuli, and (*b*) of responding thereto in definite and separate ways, is *the* property which living protoplasm, and the simplest protoplasmic organisms, animal or vegetable, possess: it constitutes the function of *feeling*, the fundamental constituent and primordial factor in the constitution of consciousness. It is interesting now to observe how, as we ascend the scale of animal life and arrive at the next grade of the animal kingdom, the *Metazoa* (multicellular organisms), we find a specialised system of protoplasmic elements (cells) set aside for the same purposes indicated above, and thus for the first time a physiological division of labour is established, which is apparently in the best interests of the organism as a whole. Corresponding to this physiological differentiation of function there is a morphological differentiation of structure, which can be recognised by the microscope; "and among such morphologically differentiated tissues we find the first evidences of distinct nerve elements in the animal kingdom" (*vide* especially Romanes [*Star-fish, Jelly-fish, and Sea-urchins: a Research on Primitive Nervous Systems*, 1880] and the brothers Hertwig [*On the Sense-organs and Nervous Systems of the Medusæ*, 1880]).

Segmentation of the Organism.—Thus early do the special elements and tissues appear which subserve all those activities in the life of the organism which we may specifically call neural and psychical, or neuro-psychical, as distinguished from the similarly differentiated *digestive*, *reproductive*, and other specialised activities which are also associated with other specifically differentiated tissues. It further happens that in the course of evolution the Metazoa very soon exhibit a preponderance of growth, which assumes the form of segmentation. The body grows into an elongated structure of several segments, neuro-muscular, digestive, excretory, &c.; in short, each segment, while preserving an individual life of its own, yet joins and shares in that of its neighbours, thus constituting part of a more complex and complicated whole. Parallel with this increased size and complexity of the body generally there proceeds a corresponding aggregation and segmentation of the neuro-psychical elements into a central nervous axis, running through the whole length of the animal from cephalic to caudal extremity, and harmoniously uniting all. [The student has here only to recall to mind the nervous system of the common earthworm,

leech, or caterpillar, to impress these facts more firmly in his mind (10).]

The Encephalon.—The nerve elements, however, do not maintain an equal degree of development in every part and segment; variations and inequalities of growth soon make their appearance; a concentration or increase of growth takes place, especially at the cephalic or anterior end of the body, constituting the encephalon or brain of all the higher animals (including all Vertebrates).

The reasons for its development at the anterior or cephalic end of the body need not detain us here; suffice it to say that this has been discussed in a separate communication of the present author, where other collateral biological and comparative facts of importance are also dealt with (*vide Brain*, Winter, 1894, chapter "The Cerebral System," pp. 567—9). Now the encephalon, as thus constituted, is a recipient organ for various kinds of sensorial stimuli, which arrive into it by various specific pathways, viz. (*a*) by the various special sense-organs; (*b*) by the kinæsthetic pathways from the various movement organs: the sensory end-organs being the "spindle" organs (muscle-spindles) of Kühne; the branching tendon-organs of Golgi; the spiral fibres surrounding certain muscle-fibres; and the Pacinian corpuscles of fascia, tendon, and muscular septa; (*c*) by incoming tracts, whose starting-points are the glandular, digestive, secretory, and reproductive organs and tissues (viscera). It will thus be apparent that the encephalon is from the outset a great and complex sensorial recipient organ, in which are represented (*a*) the special senses, (*b*) the kinæsthetic feelings, (*c*) the viscero-organic feelings.

As we rise a little higher in the scale of craniate Vertebrates, *i. e.* to the level of the mammal, the encephalon is no longer merely an aggregate of such simple sense-and-feeling representative centres. There are higher centres developed over and above these primary sensorial centres, viz. adnexa, associating centres, which are the seat of more complex psychical processes, which we thus come to name intellectual, emotional, &c.; functions of composite origin and complex nature, whose roots or starting-points are, however, to be sought for in one or other (or several) of the above-named specific sensorial, kinæsthetic, and cœnæsthetic centres. Our analysis thus leads to the conclusion that the seat, or organ of representation, of the specific sensations,

and of the kinæsthetic and cœnæsthetic feelings, is the encephalon ; the organ of feeling, sensation, and thought,—in short, of every form and quality of psychical life.

It is possible, as we have shown in a previous paper (*Brain*, Winter, 1894, pp. 567–8, and pp. 614–621), to recognise the main great groups of Vertebrates, including mammals, as characterised by broad and marked differences of nervous organisation. We shall here formulate the main facts established by our researches into the following table of classification, a tabular scheme first propounded by the author at the annual meeting of the Medico-Psychological Association in London, July, 1896, and which is here reproduced.

Classification of Vertebrates (according to the Constitution of the Encephalon).

a. Acrania. Amphioxus, Ascidians, and larval Cyclostomes.

b. Craniata. Vertebrates with a skull developed around and over the encephalon.

Group I. *Archiencephala :* with an anlage or rudimentary encephalon only.

1. Cyclostomes.
2. Elasmobranch fishes.
3. Teleostean fishes.

Group II. *Palliencephala :* with a pallium or cerebral mantle (cortex and white substance) developed out of and over the anlage.

1. With predominant development of "ambiguous" layer of cells only ; this, together with the molecular layer, constituting a two-laminated cortex only, *e.g. Amphibia.*
2. With predominant development of "ambiguous" and "long pyramidal" layers and systems only ; these, together with the molecular layer, constituting a three-laminated cortex, *e.g.* (*a*) reptiles, (*b*) birds.
3. With feeble development of the "ambiguous" layer, marked development of the "long pyramidal" layer, and varying development of the "poly-

morphic" layer, these three, together with the molecular, constituting a four-laminated cortex, *e.g.* mammals.

Further Classification (tentative) of Mammals according to the Extent of Development of the Polymorphic layer, i. e.—

a. With *feeble development* of the polymorphic layer, its average thickness being $\frac{1}{6}$ of cortex: *e.g. Rodentia* (rabbit, guinea-pig, rat).

b. Medium development of the same layer, its average thickness equalling $\frac{1}{5}$ of cortex: *e.g. Carnivora* (cat, dog).

c. Considerable development of the polymorphic layer, its average thickness being $\frac{1}{4}$ of the total thickness of the cortex: *e.g. Simiæ* (rhesus, macacus).

d. Highest development of polymorphic system of nerve-cells, its total thickness being $\frac{1}{3}$ to $\frac{1}{2}$ the total thickness of the cortex; also a predominant development of the white substance (corpus callosum, association fibres, and projection fibres): *e.g.* human brain.

The above classification, based on a minute study and an extensive comparison of phylogenetic facts, gradually lead us to the conclusion that in the historical development and evolution of the vertebrate race, the winners in life's race, especially the mammals, predominated, owing to (or in association with) a corresponding pre-eminence in the growth and evolution of their brain; a fact which acquires additional interest when we point out that, co-extensive with the *start* in the development of the pallium (cortex) in the amphibian (from the rudimentary archi-encephalon of the fish), there is the parallel phenomenon of the first differentiation and early evolution of the pentadactyle limb (of the amphibian) from the rudimentary pterygium of the fish. Curiously interesting, and certainly striking as a fact, the parallel development of the brain pallium and the pentadactyle limb stand out conspicuously and in relief in the evolutionary history of the higher Vertebrates from the lower. The possibilities for a higher and more advanced development of the kinæsthetic functions therewith must be also kept steadily in view; the growth of the brain upward in the vertebrate series from the fish and amphibian, through the reptile and bird, to the mammal and man, bringing constantly and continually with it a higher degree of com-

plexity and greater extent of evolution, especially in its life of relation (kinæsthetic life) to the environment, and an increase of kinæsthetic representation in the cortex. The psychological significance and import of the above observations will have already dawned upon the student, and will prepare the way for further considerations and study of the neuro-psychical mechanism and its evolution.

Part III.

The child comes into the world with a brain which has but one third the weight of the adult brain. At the close of the first year of life the brain weight has doubled itself; it is now two thirds of that of the adult (11).

Starting from these established facts, certain interesting details will now be described, reference being made to various mammalian brains as well as to the human brain.

In the new-born and young of mammals (*e. g.* kitten, rabbit, mouse, and other animals), while the individual nerve-cells (neurons) which compose the brain, and are aggregated into clusters and strata in the brain cortex, have already at birth reached the fulness and completion of their numerical growth (12), the individual nerve-cell in its entirety (neuron) has by no means reached the acme of its evolution. The progress of growth and development takes place mainly in two directions: (*a*) in the size of the cell body and its processes; (*b*) in the extent, variety, and complexity of its connections. Certain changes of a structural and chemico-physical kind also take place within the cell protoplasm and nucleus too, and in their relative proportions to one another as growth and elaboration proceed. These phenomena are of the deepest import, for with careful and comparative observations we are able to see, to trace step by step, and in a measure, therefore, to comprehend and understand some of the deepest mysteries of psycho-physiological life as manifested in the nervous mechanisms and organisations which subserve it at these early stages of life. The evolutionary processes may for convenience be examined under the two aspects of quantitative and qualitative evolution.

Quantitative Evolution: Growth in Size of the Neuron or Brain Cell.—In the kitten at birth, and for some little period on its way to adult life, growth in size of the cell body takes

place in the brain cells. But this soon ceases; and in the young cat of a few months old, and in the adult one of two or three years old, the *cell bodies* do not differ in size. The present author, from observations on the brains of young kittens (about six or seven months old) compared with full-grown cats (of rather over a year old), could further find no appreciable difference in the size of the nerve-cell bodies in the following regions of the brain cortex; viz. (*a*) the anterior limit of the sigmoid gyrus, and (*b*) the uppermost arcuate (marginal) convolution.

Having compared also the cell bodies from the ascending frontal convolution of a child two and a half years old with a number of brains from adults of various ages (twenty-five to fifty), the present author failed to find any notable difference in the size of the brain-cell bodies for corresponding regions of the brain.

On the other hand, it is a notable fact, observed by Vignal (and confirmed by the present writer), that in a fœtus of five months the cell bodies of the cortex are distinctly smaller (1 3) and more closely packed together in the cortex,—indeed, so closely that in many specimens the nuclei of the cells seemed almost in contact with each other. But towards the close of fœtal life, and at about full term, what would seem to occur in the human fœtus and new-born, and in fœtal and new-born animals, is as follows:

The cell bodies grow in size, till at birth they have very nearly reached the limit of size (plumpness and rotundity); that limit is, however, reached at slightly varying periods, but in any case and generally while the animal is still very young.

But meanwhile the brain as a whole continues to grow rapidly, steadily, and conspicuously in bulk, whence it happens —as we have stated at the beginning of this section—that the brain weight (in the human being) doubles itself in the first year of life. In the human brain, as in the brains of mammals, it is seen that towards the close of fœtal life, and in the early months of extra-uterine life, the cell bodies of the cortex seem to get further apart from one another—much more so than their very slight increase in size would be adequate to account for; and this phenomenon was explained by some of the earlier authors as due to an increase of blood-vessels, of neuroglia, or of ground substance (Boll).

Our own researches, following in the footsteps of Golgi, and

based on the study of a series of kitten brains of various ages, from the fœtus about a week before full term to the young kitten about a month old, have shown us, however, that the cause of the apparent (and indeed real) separation of the cell bodies is not due to the growth of non-nervous structures pushing the nerve-cell bodies further apart, but really to the next factor, viz. the increase in the growth in size, extent, and complexity of the various cell processes (protoplasmic processes, nerve-fibres, collaterals, and terminals) issuing from the cell body, the full and precise recognition of which in all their extent of growth and complexity of branching has been only possible since the use of Golgi's method. The evolution of the nerve-cell in these respects can be more readily and properly included under the category of qualitative evolution.

Qualitative Evolution.—On the anatomico-physiological side this comprises the *growth in the extent and complexity of connections of the protoplasmic and nervous processes* of the brain cell. This is the real and fundamental fact as shown by the Golgi method.

The growth which takes place during the close (last month) of intra-uterine life, and during the period of infancy, is, as far as the cortical nerve elements are concerned, *not a numerical* increase of elements ; it is to a *slight extent* a growth in size of the cell body : but in the main and most notable extent it is a growth of the processes in the way mentioned above, viz. a qualitative growth. The nerve-cell bodies, which in intra-uterine life seemed close packed and touching one another, now get separated from one another, being pushed apart by the extraordinary growth of protoplasmic processes emanating and growing out from the cell body, either as apical or basilar processes in definite directions, or (apparently) more irregularly in all directions ; and simultaneously with this a parallel growth of medullated nerve-fibres, collateral and terminal fibrils, also takes place from already existing axis-cylinders which pervade the cortex also. The cortical nerve-cell bodies remain numerically the same ; no karyokinetic division and increase of number can be observed. But the increased growth of protoplasmic and nervous processes pushes them further apart, and hence the nerve-cell bodies seem *apparently* to get more sparse in the growing brain.

In a previous communication the author has given illustra-

tions showing the nature of some of these changes, for further information regarding which the original paper must be consulted (*vide Brain*, Winter, 1894, pp. 640–42).

It must be added that all parts of the cortex (*i. e.* various "centres") do not develop equally or simultaneously; there are local or regional variations (14). Similarly in any one area or centre the various nerve elements which constitute the several cortical layers do not grow and develop uniformly or at the same time; some cells have advanced considerably in development (*e.g.* the large pyramidal cells of the Rolandic or sigmoid area), while other smaller pyramidal cells are in a more backward stage; while again the polymorphic elements are at this stage almost the least developed, and therefore youngest of the cortical elements. There is not only a heterogeneity of structure and of function, but a heterogeneity in the times and rates of development of the cortical elements of the brain. Growth and elaboration are going on in different parts (tracts and centres) at different times and at different rates, and so as to subserve the various functions which, gradually and selectively evolved and perfected in the long ancestral past of the species, now appear in orderly co-existence and sequence in the actual early life of the organism, with a regularity and stability born of the accumulated hereditary conditions in the æons of the past.

Physiological Elaboration.—By this growth and elaboration of the cortical neurons certain possibilities are realised. The cortical mechanisms for the various sensorial processes, as well as for various movements, are rendered capable of being trained and perfected. For with the growth of the protoplasmic expansions (dendrons), and the contact granules situated thereon (epidendritic granules), these latter come into functional association with a greater and greater number of fibrils which pervade the strata at various depths of the cortex, the molecular layer first and most abundantly, and more diffusely the various other cortical strata also.

They (*i. e.* the nerve-cells whence these processes arise) therefore can receive and react to a larger number of incoming excitations reaching them from (*a*) cells of the same area, or from (*b*) associated (sensorial or kinæsthetic) areas of the same or opposite side, or (*c*) from the areas of the cortex not so specifically defined, or (*d*) from the upward sensory projection fibres (fillet system, optic radiations).

And, with the increased growth in number and extent of collaterals, the superficial pyramidal cell, like the ambiguous cell, is able to transmit currents (excitation of its own) to the neighbouring and deeper lying pyramidal cells, whose apical or basilar expansions these horizontally running collaterals touch. This serves not only to render the whole body of nervous excitations from the cells discharged down any one tract (*e. g.* pyramidal tract) consolidated as it were *en masse*, but by such means of neuro-protoplasmic contact, whereby the upper cells can influence the lower in series, capacities for nerve action are furnished which by the special growth of this or that protoplasmic branch, and this or that collateral and terminal related thereto, can grow into definite and well-integrated nervous mechanisms for subserving various movements which we know various cortical areas are possessed of.

Education.—In intra-uterine life the environment is sensibly constant and uniform, the variations therein being slight in character, slow in rate, and (in health) of steady persistency; the sentient life of the fœtus is at its lowest ebb (somnolescent and vegetative stage).

After birth variety begins in life; and with variety in the environment there begins, or should begin, the first marked variations and disturbances in its sensorial and kinæsthetic and organic life. The training and education of the nervous system now begins. At first there is much confusion and turmoil—a condition of necessity imposed on the neurons, which are themselves rapidly growing, and are at the same time being subjected to varied, intense, and novel stimuli from the environment. There is a weakness and unsteadiness as well as a violence in its reactions, together with much that is at first aimless and superfluous in the way of muscular action; its early weak and unsteady movements of dyskinæsis grow gradually and slowly—by a tedious process of repetition and education of certain movements, and the non-repetition of others—into the later, stronger, and steadier movements of eukinæsis which appear as growth goes on. Yet here again we find that not all movements and acts develop evenly or equally; there are variations of a very definite sort. The new-born child can perform some movements well; the nervous organisation for these has been almost perfected in the bulbo-spinal centres already, and requires but the presence of adequate stimuli to call them forth

almost in perfection. Among such may be mentioned the movements or acts of (*a*) breathing, (*b*) crying immediately after parturition, (*c*) sucking, and (*d*) simple grasping with the hands and fingers an object placed within the hand. To these may be added the special respiratory reflex movements of (*e*) sneezing and (*f*) coughing; all of which, when suitably evoked, will be seen to be well performed (15). A second category comprises (*g*) reflex movements of the limbs, generally from contact with objects (bedding and clothing, person of the mother, nurse, &c.), as well as with cold air. These are mostly quick, sometimes sudden, rapid, and random movements, of small extent, and of aimless purpose apparently; to this group should also be added (*h*) aimless or purposeless sounds uttered by the voice also, and (*i*) the occasional movements of starting observed in the infant. Crying at the feeling of hunger; (*k*) does not perhaps come under this category, though could we trace more clearly than we can the nexus of cause and effect in *all* these movements we might possibly find the number of so-called purposeless movements restricted to quite a few only.

Instinctive acts begin to appear later in the child, and intermixed with these at a still later date definitely imitative acts and movements appear. Together with these instinctive and imitative capacities there develop the corresponding emotions of child-life. With the first impulses to imitation those to significant vocalisation are born. Emulation rapidly ensues, pugnacity follows in its train. Fear of definite objects (partly instinctive, but partly also acquired in association with painful or disagreeable experiences) is also developed early, though at variable times in the human young. Play, curiosity, and acquisitiveness (and even greed), all begin also very early, and manifest themselves within the first two years of life. Other instincts develop later. The progress of cerebral growth and organisation rapidly goes on meanwhile (as a rough indication of this, the curve of brain-weight in infancy may be studied by the student, together with the chapters on quantitative and qualitative evolution in our previous work in *Brain*, Winter, 1894. The protoplasmic processes and epidendritic granules of the brain-cells, their growth in size, extent, and complexity of connections, the internal elaboration in cell body and nucleus, and the correlative growth of nerve terminals and collaterals in the brain, are thus of the profoundest significance; the growth

of each terminal dendron, the formation of each epidendritic granule, and the coming into contact of these with nerve-fibrils (terminals and collaterals), constituting the milestones—or perhaps the inches and footsteps—which mark the slow advance in the countless constituents of cerebral (mental) organisation.

[The student who wishes to have a detailed knowledge of the various tracts in the brain, their connections with the various centres, &c., should consult the works of Arnold, Meynert, Sachs, Bianchi, and the text-books of Dejerine (16) and Kölliker (17).]

The progress of our investigation is now ripe for our taking up the next great theme, the *law of psychogenesis.*

Law of Psychogenesis.—The known facts concerning the mode of development of the brain—as an organ of mind—furnish material wherewith to construct one side of the scheme of educational training which the growing brain of the child is capable of receiving. Education is the practical application of such knowledge. And from this standpoint education is not *merely* a social convention, but a real means for attaining real ends by the medium of an organisation—the cerebral organisation—which the child is endowed with at birth, which is plastic and improvable, capable of high development and elaboration, and peculiarly impressionable to the environment during all the early period of its evolution from infancy to adolescence.

From the modern and scientific standpoint, therefore, education means such an unfolding and developing of the general cerebral and special mental functions as shall put the individual into the widest and most effective relations with the environment—physical and material, social, moral, ethical, and religious; so that all those functions and capacities shall be developed to the best and widest extent, which shall make for the conquest and governing of the world of nature on the one hand, and for the understanding and fulfilling the duties and responsibilities of family, social, and national life on the other.

In the child the whole progress of education and acquisition of knowledge is a long, a tedious, and an effortive toiling, accompanied by varied painful and pleasurable emotions, and by a more or less continuous psychical turmoil. On the executive side there is the slow and tedious development of the kinæsthetic mechanism, associated with the correlated growth of the auxiliary co-operating visual centres (18); on the

side of speech utterance there is a similar gradual effortive and tedious evolution of the glosso-kinæsthetic and the auxiliary auditory mechanisms also, in all cases from dyskinæsis to eukinæsis. And while these numerous evolutions are taking place in the Rolandic area (kinæsthetic sphere), whereby the cortical mechanisms which subserve the higher executive phenomena (which we term acts, speech, conduct) are perfected, there is taking place on the sensorial side a somewhat parallel development, whereby distinctness and vividity of sensations, their sharp integration and differentiation from one another, and the capacities for their *quasi*-spontaneous revival (recollection) in the brain are rendered possible.

Between these two great spheres, the sensorial on the one side and the kinæsthetic on the other, lies what, for want of a better title, we may call a transition region, varying in extent, but of the existence of which we are sure on anatomico-physiological, psychological, and pathological grounds (19).

In the child the march of evolution, as all observation shows, is in general terms from dyskinæsis to eukinæsis for movements, speech, and acts generally. Similarly, and *pari passu*, the child's capacities for sense-perception also get improved, better defined, and intensified. It passes through the lower grade of *imperception* to the higher grade of *apperception*. In the earlier functional stages the various sensorial and kinæsthetic currents (messages) arriving in the brain excite neurons which are themselves rapidly growing and changing, and which from that fact alone are the seat of a continuous psychical turmoil.

The psychological state which accompanies these conditions is one in which, with such change, rapid growth, conflict, variety, and turmoil, the empirical ego is not yet consolidated, and the unity of psychical life is not yet felt and realised ; there is as yet no formed and unified ego, it is in course of formation—inchoate, chaotic. On the brain thus formed and forming the external logic of things has a potent and, indeed, a remarkable influence. Various objects, individually and in sequence, and in simultaneity, in various ways and under various associated conditions, tend to be presented again and again to the child. The individual sensations get defined and integrated. A series of separate and varied sensorial images are thus impressed on the cortex. Similarly the process goes on in the various

portions of the kinæsthetic area. Further, the occurrence of two or more objects in the environment affecting the child has to be considered. At first resulting in confusion, this is soon replaced by combination or association of the corresponding cortical images. The apposition (concurrence) of two events without, *i. e.* in the external environment, soon calls up in the mind a corresponding combination (or association) of two sense perceptions within, *i. e.* in the brain. Similarly the sequence of phenomena without, acting on the sensorial sphere, calls up a sequence of perceptions within. There are the rudiments for the association of ideas; the occurrences and impressions of nature are the pabulum for the growing brain of the child. Observations on young children will reveal daily numerous instances in which their mental growth is seen to take place along the lines thus indicated (in all the above observations it is of course premised that the child is healthy and properly nourished). Some further considerations will now be entered into on the law of psychogenesis in connection with the subject of languages.

Language; its Co-operation in Brain Development.—"The teaching and learning of language is, for the child, not a necessity, but a convenience; it allows it to represent things by a common denominator." This is the whole value of the thing, the crux on which its merits rest, as we have stated in a previous publication (*Brain*, Winter, 1894, p. 646). And the child is continuously doing this. An analysis of this part of our study reveals in detail how language is useful and valuable. It is useful in proportion to—(*a*) its symbolising (or representative) power; (*b*) its comprehensiveness; (*c*) the economy of labour and time in expressing and communicating ideas; (*d*) its ability to lead to higher and more complex and also more abstract symbols, conceptions, expressions, and formulæ of the highest order or value, as in the sciences, arts, and literature. Its immense value as an instrument for the reinforcement of psychical activities (which, however, can take place in its absence) co-operates greatly in brain development; it is capable of representing the most varied and different things in common and convenient terms, and it is of the highest *formal* value in the *exercises and repetition of psychical processes* which underlie mental evolution.

It thus comes about that by the help of words and language

we are able to climb into higher regions of abstraction, to experience more complex emotions and feelings, to command more complex processes of thought.

Similarly for numbers and mathematics; man begins by counting things, giving to each unit a name. So the names for the first few (say ten) units arise. All this is done in the concrete, and by the use of little stones, sticks, or the fingers and toes. He then learns to count *in the absence of things*, now using the numbers as symbols, *i. e.* as words uttered or written. With these abstract signs arithmetic begins. From this he passes to higher and more complex representations; to the signs, symbols, and operations of algebra, where the terms and signs are not only abstract, but general—representative in a higher degree; he calculates not merely numbers, but numerical relations. From this again he passes higher into the calculus of functions, their variations (fluxions), and to relations of the highest and most complex sort. He thus furnishes the economic process and time-saving formulæ for mechanics and machinery, engineering, optics, electricity, chemistry, navigation.

Further, much of its knowledge of nature and its individual surroundings are by the child acquired (in *early* childhood) in a rather passive way. Some of the foregoing observations will have already served to point out this feature, especially as regards the development of its concrete concepts of things. Psychological observers are generally agreed on this point, which is well stated by Sully: "The more concrete concepts or generic images are formed to a large extent by a *passive process of assimilation*. The likeness among dogs, for example, is so great and striking that when a child, already familiar with one of these animals, sees a second, he recognises it as identical with the first in certain obvious respects. The representation of the first combines with the representation of the second, bringing into distinct relief the common dog features, more particularly the canine form. In this way the images of different dogs come to overlap, so to speak, giving rise to a typical image of "dog." Here there is very little of *active* direction of mind from one thing to another in order to discover where the resemblance lies; *the result forces itself upon the mind*. When, however, the result is less striking, as in the case of more abstract concepts, *a distinct operation of active*

comparison is involved" (Sully's *Outlines of Psychology*, p. 342). In the child's mind both kinds of processes are going on, and, with the aid of language, further evolution in both directions is rendered possible. Thus, to quote an example given by ourselves previously, the child learns to call its *nurse* "Bi," and its term for *to hide* is "tik." The nurse hides behind the curtain, and the child learns to express it by the term "Bi-tik." But one day it looks out of a window and sees the sun getting covered over by a dark cloud, and the child now, on this novel occasion, cries out "Bi-tik" several times, pointing its finger to the cloud. Already the child had learnt to utter the two words together in the nursery for a special purpose, and now under other skies the same expression reappears—is re-uttered under the novel circumstances just noted. The somewhat *crude similarity* in the external sequence of events—a bright and conspicuous object, a dark curtain, and the one disappearing behind the other—combine to furnish the new material for the building up of a new compound idea; new in one way, and yet not altogether new, but having affinities (resemblances) to an item in the child's previous experience. The present author thinks that in this case the correct mode of regarding the law of psychogenesis is not to assume that the child in a deliberative and volitional and effortive way utters this proposition, but rather that this is effected *for* the child by the external logic of events. The *formation* of such rudimentary propositions first, and their *extension* then to things new and yet similar to and comparable with things familiar,—these two processes are the basis of psychological development in the child. Children see resemblances early, and they are exceedingly and crudely anthropomorphic. The young child seeing for the first time dew on the grass, and calling out to its father, "Father, the grass weeps," though uttering what the adult might, in his superior knowledge, call a quaint, and even poetic conceit, is really jumping to a crude anthropomorphic conclusion, from its superficiality of knowledge and insufficiency of experience. All these characteristics are known attributes of the child's mind, and they have accordingly been taken advantage of by some keen observers of child-nature, to found thereon a system of education and practical training, with which the name of Froebel is more particularly associated. This method of infant training, to which the name

of "kindergarten" has been given, is now extensively adopted. Froebel devised a series of exercises for young children, beginning at the age of three or four. Realising that the first thing the child wanted to do was to see, grasp, handle, and move about things, and to exercise his senses and limbs generally, and particularly in play and sport, he sought to arrange a set of simple and appropriate exercises and employments with a conscious educational purpose, and in careful obedience to the suggestions of nature. We can only enumerate them : (*a*) wooden bricks, simple or multicoloured, for arranging and building up models and designs resembling objects ; (*b*) coloured papers for folding into various patterns ; (*c*) plaiting of straw or slips of paper into patterns ; (*d*) pricking diagrams and pictures on paper, followed by sewing the same with coloured threads ; (*e*) tracing of lines of gradually increasing length, number, and complexity, to develop new and pleasing geometrical patterns ; (*f*) organised games, dances, and physical movements of a rhythmical kind to simple music ; (*g*) acting and little dramatic performances resembling real life and work, as in the garden, the kitchen, farm, street, &c.

All these were but the outcome of a simple yet intelligent appreciation of and sympathy with the child's mind. Further developments have been initiated by various teachers since, and no more interesting account of a few of the new departures can be found than in the excellent and suggestive little work of Dr. Mary Jacobi (*Physiological Notes on Primary Education and the Study of Language*, New York, 1889).

Another neurological fact of importance in psychogenesis must be also specially referred to, viz. the rhythmic and *quasi*-spontaneous activity of the brain. The brain is not merely the plastic and educable mechanism which we have hitherto found it ; it has its broad rhythmic periods of enhanced and diminished functional activity. Propositions uttered by the brain as the result of an apposition of mental images tend to be repeated—either with conscious pleasure, with effort, or even seemingly unconcernedly—by the child over and over again. Like a haunting tune or strain of melody in the cultured ear, so common objects, daily impressions, and ideas related thereto run their nervous circuits over and over again in the child's mind. This happens, as observations on children show, when the child is in a different environment, and occupied with other

things than these recurrent images and thoughts. In the absence of presentative stimuli there is a *quasi*-spontaneous revival of the juxtaposed ideas in the mind which occurred in the past, and their repetition over and over again—a re-visualising of things seen before, a re-hearing of things heard, and re-vivifying of things previously felt and experienced. And so it comes about that experiences and incidents apparently trivial to the adult eye contribute to form the mental structure, and shape to some extent the temper and disposition of the child; and the accumulated mass thus formed and forming serves to modify nearly all subsequent actions. Association and habit go hand-in-hand.

Further Mental Evolution: the Ego.—The vividness of the child's memory for sensuous impressions; its love of bright-coloured and showy things—toys, books, dresses,—its fondness for gorgeous and fairy tales in which sensuous elements preponderate, the vividness of its dreams and of its terrors (*e.g.* night terrors), all conspire to show how the sensorial sphere is growing and developing in early childhood, and how associations of ideas, vivid mental images of objects and occurrences, and the capacity for their rhythmic, frequent, and spontaneous revivals in the mind are actually realised; how simple sensations combine and cohere into complex ones; how simple ideas of the concrete combine and overlap into generic ideas; and how, when simple ideas from sufficient repetition get sufficiently organised, they get spontaneously or indirectly, and by way of circuitous mental routes, recalled at times, and without any obvious, presentative, external stimulus. In other words, there come about times and stages of development for the various centres and mechanisms of the brain, when the external logic of events is no longer a *sine quâ non* needed to revivify them. They arise spontaneously as reminiscences, or in association with trains of thoughts and feelings which, indirectly and circuitously, recall them (recollections, memories). The feelings of spontaneity which accompany these thoughts of the child gradually cohere into a complex mass, the empirical (sensorial-kinæsthetic) ego as the source and centre of such feelings. Other and further factors also enter into and form part of this highly complex mass. By so much as objects in the external world oppose the ego, constitute obstacles to its spontaneous and overflowing activities, by every obstacle overcome, every pain

felt, so there is a clearer severance established between the ego and all these others, its antagonists, the non-ego. Further, the organic feelings arising from growth, metabolism, the action of the viscera, &c., during healthy life (cœnæsthesia), all contribute their constant and indeed voluminous quota towards the groundwork and foundation of the ego. It will thus be seen how, even expressed in general terms, the ego is a complex of the most numerous and heterogeneous sensations, feelings, memories, tendencies, habits, gradually evolved in different ways and directions, and gradually consolidated and united into a most complicated whole. It will be seen that the ego is thus built up gradually and empirically, and is gradually integrated and demarcated, gradually recognised as distinct from external objects. This is therefore the fourth stage ; the next gradual evolution from the earlier sensuous and rudimentary rationalising stage of the child, viz. the stage of self-particularising and integration of the ego.

We shall now find it convenient to briefly recapitulate these four stages in the development of the human brain (mind), broadly speaking :

a. The vegetative, somnolescent stage (of intra-uterine life).

b. The immanently sensuous and non-rational stage (first months of life).

c. The primitive rational stage (latter part of the first year, and second year of life).

d. Stage of self-particularising and integration of the ego (from the third year onwards).

These various stages are never sharply defined ; they gradually blend in parts, and overlap considerably in others. This is naturally to be expected ; the ego is an infinite complex of sentient units, and all parts do not develop evenly or equally.

We shall now trace the processes of psychogenesis and the evolution of personality a little further.

With the increased extent and multiformity of the environment with which the child comes in contact, with every increase in the amount of obstruction and antagonism encountered and overcome, the empirical ego grows in clearness and integration, and in its feeling and consciousness of separateness from all else—the non-ego. The rapidly growing fore-brain gradually begins to assert itself, gradually but decidedly taking its part as the predominant partner of psychical life ; each new activity,

each struggle, each painful (and to a less extent pleasurable) feeling but serves to sharpen the feeling of contrast between ego and non-ego, and to integrate the ego. Thus true self-consciousness arises. Habits are gradually formed. Inherited instincts and propensities now seek for more determinate expression, as the mechanisms of expression, speech, and action (Rolandic or kinæsthetic centres) are developing and become more and more efficient servants of the organisms. Between these on the one hand, and the wider and newer conditions imposed by nature and the environment on the other, there is a continual stress and conflict. New and added experiences and restraints come into play—home life, school life, the rule of parents and guardians, moral and social precepts and limitations. All of these act on the ego in determining its final shaping and disposition; all contribute towards the perfect formation or deformation of the ego, surrounding, controlling, coercing, and limiting or encouraging its growth, expansion, and tendencies in this or that direction; compelling recognition of and obedience in great measure to nature and the community. He learns to conquer nature (intellectual progress), and to perceive and realise relationships and the duties arising from relationship (moral progress). And thus the tedious battle and struggle, which is the necessary condition of the highest evolution, goes on during later childhood. At the close of this period another and different series of phenomena are entered upon; a rearrangement, almost a crisis, occurs in the organic and psychical life. This is the period of puberty and adolescence.

Puberty and Adolescence.—Before proceeding further, however, it will be well to tabulate in a measure the general characteristics of childhood, in order that we may be able to comprehend and realise more clearly the following remarks, which deal with the conditions and traits of puberty and adolescence. The general characteristics of healthy childhood are as follows:

1. Domination of the immediate and the sensuous.
2. Deficiency of reflection, and of regard for the future (prudence).
3. Emotional instability, impulsiveness.
4. Credulity, suggestibility.
5. Aggressiveness, grasping for power and the tyrannical use of it, greed.

6. Absence of altruism, bigotry.
7. Exuberance of boisterous and sportive instincts, overflow of animal spirits.

The moral or ethical nature, which really means the holding of the emotions, appetites, and passions in check, under the dominion of the higher psychical centres (judgment, and exercise of will), is the last and slowest to be developed in the child. And assuming that (*a*) no intrinsic antenatal vice, blemish, or disease is present, and (*b*) that the brain has not been invalided by disease or accident in childhood, the germs are there for the making of a morally as well as intellectually healthy and well-proportioned nature. Meynert had, as long ago as forty years, stated (in his *Psychiatrie*, 1859) that the fore-brain is an *inhibitory* apparatus against the lower and more instinctive natural impulses ; and the more recent experiments of *Goltz* and *Luciani* on decerebrated dogs have largely borne towards the same conclusion. In the human brain, however, the fore-brain (cerebral hemispheres), from its preponderating growth, becomes more than that. For the higher its development, the greater is the tendency to subordinate the particular to the general. Even in the insect kingdom this has been observed ; a high social growth and order takes place, as in the bee and ant communities. The same is the case in the *higher* (adolescent and post-adolescent) development of man. In the child, however, a being largely wrapped up in its instincts of self-preservation, the "primary ego" (of Meynert) is predominant, and the child is an egoistic being, greedy and grasping, dominated by the immediate and the present, a parasite, with all its instincts converging towards the animal self. As development goes on this stage is passed, the fore-brain, with its increased relational life and all that that implies, acts as a check to the purely vegetative functions and appetites, and a "secondary ego" is developed which takes precedence of the primary one ; morality and conscience grow and assume priority. This is the general law or order of society, which we call civilisation and social order. It will be clear, then, that if the fore-brain (which is thus largely an inhibitory apparatus in the sense of Meynert) become enfeebled in growth, or diseased or disordered, predominance of the natural instincts, passions, and propensities would occur (paraphrenia) ; and when its functions are almost wholly arrested in the course of evolution (aphrenia,

oligophrenia), or greatly lost and dissolved (dementia, lipophrenia), the individual is in the position of an idiot or imbecile, a criminal, anarchist, or paranoiac opposed to the ethical order of society, or a dement in the last stage of mental dissolution, and reduced to a somnolescent vegetative life, a gross caricature and far-off resemblance of the fœtal life. These possibilities need to be borne in mind in view of a classification of those diseases of the brain which involve its mental functions —*i. e.* the insanities—being contemplated at the conclusion of this paper.

The onset of puberty and the progress of adolescence bring with them certain important and profound organic (bodily) and cerebral (mental) changes in the organism. A new world is gradually opened to it. Sexual development and differentiation take place rapidly; the sexual organs and their accessories (ovaries, testes, external genitals, and in the female the mammæ) develop rapidly; the heart and vascular system grow *pari passu*, and a fresh feeling and consciousness of power, a fresh body of emotions, all arise. The pelvis in the female, the larynx in both sexes, enlarges; feelings of pleasure vaguely felt in the presence of the opposite sex, a love of idealism and amorous romance, a desire for self-sacrifice, and vague emotions of an altruistic and even mystico-religious kind are developed. These, again, may in some be erratically or abnormally developed, giving rise to the profounder forms of hysteria (hysteria major), religiosity, and mysticism of the paranoiac type, to sexual intemperance and perversions, and other mental abnormalities. In others, again, the changes and developments of puberty and adolescence may result in arrogance, excessive conceit, and a violent boisterousness and wild, riotous behaviour, coming close, it may be even to the confines of adolescent insanity. And in others again the adolescent may emerge from this critical period with his feelings and sympathies broadened, softened, and deepened, in which the purely selfish and self-assertive stage is largely built over with the higher state, self-sacrifice and altruism, the two necessary requisites for the higher development of human character. (Further researches on this stage of development will be dealt with in a future communication.) Here our exposition of the law of psychogenesis must stop, and we must now briefly deal with its opposite, the law of pathogenesis, under which the cerebral

organisation and consequent evolution of personality, and the psychical life generally, is *arrested*, *enfeebled*, *deformed*, *deranged*, or *destroyed*, and the results accruing therefrom briefly classified in a natural way (classification).

Part IV.

Pathogenesis and Classification.—It will be evident to the reader who has closely followed the subject thus far that abnormalities (morbid changes and alterations) may occur, and do occur, at all stages in the evolution of the brain and its functions, from the fœtal (vegetative, somnolescent) to the sexually mature (adolescent) stage ; and it will be further evident that the corresponding evolutions of personality, of bodily conformation and appearance, and of conduct and capacity for intellectual, social, and ethical life, will vary correspondingly in the subjects.

This is our basis for the classification of Insanity. Dividing the whole mass of such subjects or patients into two great classes or series, at one end of which hereditary, fœtal, and intrinsic vice of organisation so preponderates as to result in profound arrests and defects of cerebral (psychical) evolution, we find that at this end of the series come the more profound degrees of idiocy (aphrenia), viz. the helpless, wet and dirty, vegetative somnolescent idiots. At the other end of the scale come those morbid conditions which occur in or affect brains of nearly full cerebro-psychical development. These cases would not, and as a rule do not, present any *striking* anomalies of brain or bodily development, and may for convenience of designation be included under the term *phrenopathies*, acquired morbid conditions of the nearly full-developed brain, *e.g.* the simple vesaniæ (mania, melancholia, stupor), the toxic encephalopathies (acute and chronic alcoholic insanities, acute mental confusion and delirium, some puerperal insanities, &c.). Between these two extremes of the series, however, two large intermediate groups exist, viz. (*a*) an imbecile (oligophrenic) group coming close to the idiocies in feeble evolution of brain and personality ; and (*b*) a somewhat different group, which I would, with Morel (20) and Magnan, term a degenerative group, with anomalous and irregular developments of brain and personality, which might well be designated *paraphrenia* (Maudsley [21] terms a large part of this group the group of insane deformities of kind). Members

of this group (which includes several types) not only exhibit certain peculiarities of mind and conduct (intellectual, social, ethical), which stamp them as such (psychical stigmata), but also certain physical peculiarities of physiognomy, and of cranial and bodily conformation (somatic stigmata). These are naturally more marked in some groups than in others, the milder forms not demanding as a rule the more vigorous and drastic measures of deprivation of liberty and asylum treatment, though these individuals give rise to a considerable amount of social, political, and moral danger. Finally comes the group which includes the wrecks and remnants of previous more or less severe and prolonged cerebro-mental disease, chronic derelicts after storms, deprived of their mental (intellectual, social, moral) equipments, and reduced to various low grades and levels of mental life—a highly motley, artificial, and lumber-room group really—the chronic dements ; these might, again, for convenience and uniformity of nomenclature, be called *lipophreniacs.*

The tabulation of the various groups into classes and subclasses gives the following scheme of the insanities, based upon fundamental facts of evolution, upon deep-seated affinities in connection with pathological findings, and upon facts of both ætiological and clinical import. It will be found that the classification is a *natural* one, and at the same time practically useful : (the words used to designate the five main groups explain themselves).

I. *Aphrenia.*—Arrests of cerebral (psychical) development with absence or deficiency of evolution of personality.
   (*a*) Of somnolescent vegetative grade (many paralytic, hydrocephalic, and congenital idiots, helpless, wet and dirty, not educable).
   (*b*) Of medium and higher grade (many microcephalic, cretinoid, epileptic, partially paralytic, or simple genetic idiots), slightly improvable and educable. (The higher grades approach to the next group.)

II. *Oligophrenia.*—Enfeeblements and diminutions of cerebral (psychical) development, with a parallel enfeeblement or diminution in the evolution of personality.
   (*a*) Imbeciles of lower grade ; not educable.
   (*b*) Imbeciles of medium grade ; partially educable and improvable.

(*c*) Imbeciles of higher grade; partially educable and improvable; often with anti-social instincts.

(*d*) Feeble-mindedness (so-called defectives); partially educable and improvable; often with anti-social instincts.

III. *Paraphrenia.*—Anomalies and perversions of cerebral (psychical) development, with corresponding irregularities and deformities in the evolution of personality: (the milder forms are the so-called borderland cases between sanity and insanity).

a. Paraphrenia Mitis.—Disharmonies of psychical development, with an unbalanced formation of the ego. Of mild type, *e.g.* eccentrics, cranks, mattoids, and some types of revolutionists, mystics, &c.

b. Paraphrenia Gravis.—The graver anomalies and perversions of mind and personality. These include a variety of types, viz.—

(1) With mental obsessions and irresistible impulses (*e.g.* agoraphobia, folie du doute, dipsomania, kleptomania, &c.).

(2) With perverted (social) feelings, and delusions of rudimentary type (*e.g.* persecuted persecutors, and psychopaths of the litigious, erotic and jealous, mystico-religious, and other types).

(3) With predominant perversion of moral and sexual nature (*e.g.* so-called moral insanity), sexual perversion (uranism, masochism, saidism), &c.

(4) With predominant criminal and anti-social instincts (*e.g.* congenital criminals of the active type; and imbecile criminals of the lazy type—neurasthenic type of Benedikt).

(5) With hallucinations developing on an emotional basis, followed by systematised delusions and considerable transformation of personality (*e.g.* paranoia; various sub-types). This is the "delire chronique à évolution systématique" of Magnan.

(6) With cyclic or periodic attacks of violence or mental confusion, or melancholic depression and agitation, or alternations of these phases (folie à double forme, periodic paraphrenia).

(7) Associated with and modified by grave neuroses

(*e. g.* epileptic, hysteric, choreic, hypochondriacal, and neurasthenic paraphrenias).

(8) Associated with and evoked by the evolution of puberty or adolescence (*e. g.* hebephrenia).

IV. *Phrenopathia.*—Morbid conditions or derangements occurring in brains of nearly full cerebro-psychical development, and of apparent previous health (in childhood or youth), with corresponding morbid alteration of the personality.

(1) *Vesanic* type (*e. g.* melancholia, mania, stupor, acute mental confusion—asthenic confusion).

(2) *Toxic* type (*e. g.* alcoholic delirium tremens, mania à potu, chronic alcoholic insanities, lead encephalopathy, morphinism, cocainism, pellagra, ergotism).

(3) *Febrile micro-parasitic infectious* type : some puerperal insanities, delirium acutum (so-called acute delirious manias), and serious delirium of influenza, scarlet fever, &c. ; acute cerebral meningitis ; tubercular meningitis.

(4) *Diathetic group :* associated with a permanent and independent derangement of general bodily metabolism (*e. g.* myxœdematous, goitrous, acromegalic, and possibly diabetic insanity ; post-syphilitic pseudoparesis).

(5) *Chronic meningo-encephalitis*, of progressive type (*e. g.* general paralysis of the insane).

(6) *Involutional :* associated with involutional changes of middle and old age, *e. g.*—

1. Chronic cerebral atrophy.
2. Climacteric insanity.
3. Senile insanity.

(7) *Traumatic :* the " cerebraux " of Lasegue.

(8) *Neoplastic and thrombotic :* following hæmorrhages or multiple thromboses, neoplasms (glioma, sarcoma, &c.).

V. *Lipophrenias :* conditions of cerebral (mental) dissolution, with corresponding dissolutions of personality ; secondary to previous insanities ; these comprise many and varied lines and groups, with different antecedents, but their common feature is the one terminus and goal to which they all tend.

General Conclusions.

(1) The doctrine of the localisation of functions in a central (nervous) organ is the basis which renders a study of psychology and psycho-pathology possible; such a central organ necessarily uniting within itself sensorial, kinæsthetic, and cœnæsthetic functions.

(2) The data of normal psychology should be supplemented by and collated with those of psychogenesis and pathology to constitute a practical as opposed to a speculative and metaphysical science.

(3) The crude naturalism which gives rise to beliefs in subtle and mysterious "essences" and "principles" assumed to underlie physical, chemical, vital, and psychical phenomena, should be discarded. So should the metaphysical theories and dualism and monism be put aside as unsatisfactory, based on insufficient data, and foreign to the scientific method.

(4) The capacities which simple protoplasmic organisms have (*a*) of being sensitive to incidental stimuli, and (*b*) of responding thereto in definite ways, constitute "feeling." These capacities, subserved in protozoa by one and the same cell-body (as a rule), are associated in the metazoa with specially developed elements constituting the nervous system (*e. g.* medusa, starfish, &c.).

(5) In the vertebrata a segmentation of the organism is found in the ancestral types (acraniates), and the nervous system shows a similarly formed chain-like structure or ganglionic tube (bulbo-spinal axis).

(6) The brain is developed at the anterior end of this axis, and is at the outset a simple aggregate of sensorial centres (*a*) of special senses, (*b*) of cutaneous and muscular sense, (*c*) of viscero-organic sense. As we rise higher in the vertebrate scale, other centres (adnexa or associating tracts and centres) are developed over and above these primary centres.

(7) These secondary centres subserve functions of composite origin and complex nature, and also continue in a growing, and therefore less fixed and more plastic, stage for some time after the birth of the animal (mammals, man).

(8) In the child's brain (as in that of the kitten and other higher mammals) there is not only a quantitative growth in mass after birth, but a quantitative elaboration in complexity

of structure and connections of the cortical nerve-cells. Mechanisms are thus formed which are capable of being trained and of being educated within certain limits.

(9) The education of the nervous system begins after birth, when variations of the environment impress themselves on the child in countless numbers, and initiate the first marked variations and disturbances in its sensorial, kinæsthetic, and organic life. The vegetative somnolescent life of the fœtus is gradually replaced by one in which various sensations of intense and strong kind run through the brain, which are not yet recognised or clearly discriminated, and which produce confusion at first.

(10) The "law of psychogenesis" is that development takes place not only in the sensorial and kinæsthetic centres, but in the psychical (relational) sphere which combines these two and follows definite lines; and further that during these stages the child is peculiarly impressionable to surroundings.

(11) The evolution of language as an instrument for the reinforcement of psychical activities (which, however, can take place in its absence) now co-operates greatly in brain development. It allows the child to represent the most varied and different things in terms of a common denomination; it is that of the highest *formal* value in the exercises and repetitions of psychical processes which underlie mental evolution.

(12) The gradual recognition of the empirical ego as the centre and source of spontaneous activities, and its distinction from and antagonism to the external world, are the bases of self-consciousness, self-assertiveness, and volition. The instincts proper to this stage are mainly egoistic (greedy, grasping, and parasitic), and largely dominate its acts and conduct.

(13) As development goes on this stage is passed, the forebrain, with its increased psychical and relation life, acts as a check to the purely vegetative functions and appetites, and a secondary (ethical) ego is developed which takes precedence (more or less) of the primary ego. Morality and conscience grow and assume priority.

(14) With puberty and adolescence a new order of feelings and instincts (and the bodily organs related thereto) are largely and rapidly developed, causing a rearrangement and partial transformation of the ego. This stage is characterised also by a development of aspirations and sentiments towards self-sacrifice, altruism, and religion.

(15) The "law of pathogenesis" is that many of these evolutions in brain and mind, from the fœtal (vegetative somnolescent) to the adolescent (sexually mature) stage, may undergo morbid *alteration* (perversion) or suffer *defect* (absence), and such pathological conditions of the brain are the bases of the insanities.

(16) The insanities so regarded fall into groups which assume a serial and tree-like arrangement. At the lower end of the series come (*a*) the profound arrests (aphrenias, idiocies), and (*b*) enfeeblements (oligophrenias, imbecilities) of cerebro-psychical development. At the other end of the scale are placed (*d*) the phrenopathies (*e. g.* the vesariæ, acute and chronic alcoholic insanities, general paralysis, climacteric insanity, &c.). Between these extremes comes (*c*) a "degenerative" group (the paraphrenias, obsessive and impulsive, vicious and criminal, paranoiac and hallucinatory, hysterical and epileptic, cyclic, and hebephrenic types). Fifth and last (*e*) come the lipophrenias, conditions of psychical dissolution, with corresponding reductions and degradations of personality, following upon and secondary to previous insanities.

References.

1. Mercier.—*The Nervous System and the Mind.* (Macmillan and Co., London.)
2. Bevan Lewis.—*Text-book of Mental Diseases,* 1889 (Griffin).
3. Hering.—*Theory of the Capacity for "Organic Memory" of Living Protoplasm.*
4. Compare Hadrian's "Address to the soul by the dying person,"—a well-known little verse.
5. Caird.—*Hegel's Life and Philosophy* ("Philosophical Classics for English Readers").
6. Max Werwarina.—*General Physiology, or Science of Life.* (English translation, 1898).
7. Lloyd Andriezen.—*Newer Aspects of the Pathology of Insanity* (*Brain,* Winter, 1894).
8. Binet.—*Psychic Life of Micro-organisms.*
9. Max Verworn.—*Psycho-physiologischen Protisten-Studien.*
10. Retzius.—*Biologische Untersuchungen* (vols. i–iii).
11. Topinard.—*Anthropology;* and Donaldson—*Growth of the Brain.*
12. Schiller.—*On the Oculo-motor Nerve-fibres,* &c., in *Donaldson* (*loc. cit.,* pp. 163-171). Occasional karyokinesis in nerve-cells is very rare (Ziegler in *Beiträge zur Path. Anat.,* vol. i, part i, 1897).
13. Vignal.—*Développement des Eléments du Système Nerveux,* 1889.
14. Flechsig.—*Gehirn und Seele,* 1895 (*vide* also *Journal of Mental Science,* January, 1899).
15. Preyer.—*The Mind of the Child.*
16. Dejerine.—*Anatomie du Système Nerveux,* 1896.
17. Kölliker.—*Handbuch der Gewebelehre* (Nervous System, part ii).
18. Andriezen.—*Loc. cit.* (pp. 675–8).

19. Flechsig.—*Loc. cit.*, and *Journal of Mental Science*, January, 1899.
20. Morel.—*Traité des Degenerescences Humaines*, 1859.
21. Maudsley.—*Pathology of Mind*, 1896.

Acromegaly with Insanity. By David Blair, M.B., County Asylum, Lancaster. (1)

Although the condition of acromegaly existed and was described many years ago, its recognition as a morbid entity practically dates from the year 1886, when Dr. Pierre Marie, of Paris, named and defined it as a disease characterised by great overgrowth of the hands, feet, face, and head. Since then the disease, though rare, has been universally recognised, and more than 200 cases have been reported. Of these some have been typical, some atypical, and some have not been acromegaly at all.

The following case, which has been under my observation for more than two years, besides being typical, has the additional interest of being associated with a well-recognised form of insanity.

J. S—, a tailoress, was admitted to the Lancaster County Asylum on the 1st of May, 1891. Three months before admission some of her teeth had been extracted under nitrous oxide gas, which was the assigned cause of her insanity, and one month later she began to exhibit delusions.

She persistently complained of a gas which pervaded the house and suffocated her. She charged certain people with maliciously causing it to enter. She maintained that she talked to people at a distance. She would walk about in front of her house with only her nightdress and boots on, and had to be brought in by the police. Four weeks before admission her delusions became so troublesome that she was constantly out of bed at night to search for the source of the gas.

The patient was married and had four children. Only the youngest of these had survived, and was, at the date of admission, nine years old. She had had no miscarriages, nor was there anything peculiar about any of her children. There was no hereditary predisposition to insanity, so far as known.

Though usually sober, quiet, and industrious, she had at times been intemperate. For six years menstruation had been irregular, and for some time she had been subject to headaches.

At the time of admission she was an unsightly woman with low forehead and coarse hair. Her nose, hands, and feet were very large. Her speech was slow, and she said that she could not use her needle so dexterously as formerly. Her bodily health was good: pulse 72, respiration 16. At night she usually curled herself up in a blanket and insisted on sitting on the floor.

For several months after admission she worked well in the kitchens, but could often be seen with her head hidden behind her apron, or any other convenient article, to ward off the gas. She continued to complain of increasing and severe headache, and began to perspire heavily. She would weep, groan, wipe the perspiration from her face, and say "See what they are doing with the gas!"

Antipyrin had no effect on the headache, but large doses of potassium bromide had some quieting influence by day.

Her face became puffy, the hands and feet soft, spade-like, and swollen, as if myxœdematous. For a long period, therefore, thyroid extract was given in beef tea.

During the past summer I noted the following symptoms:— All the tissues of the hands are enlarged except the bones. A skiagram represents the bones as, if anything, less than normal. The result is a general hypertrophy in width and thickness, but the length from the wrist to the end of the middle finger is not increased. The feet are similarly affected. There is no pitting on pressure. The arms and forearms are of large size, but do not correspond in dimensions to the hands. The cranium is elongated in the antero-posterior diameter, and presents some hyperostosis along the margins of the interparietal suture.

The face is elongated and oval, while the hypertrophy, of the nose and lower jaw especially, is slightly greater on the right side than on the left. The forehead is low, and supported on well-developed orbits. The eyes are relatively small and out of proportion to the size of the orbits. The lids are long and thicker than normal. The nose is the most hypertrophied part of the face. The alæ are especially thickened, and en-

larged at their lower part. The upper lip is less hypertrophied than the lower, which is very prominent. The mouth is usually open, and the tongue, tonsils, and pillars of the fauces are hypertrophied. The voice is guttural and metallic. All the teeth which were not extracted have fallen out; they are very small.

There is kyphosis of the spine in the cervical region, and the patient can hardly hold her head straight. Her favourite position is sitting with her arm on a table, and her forehead resting on her arm. All the tissues around the neck are much hypertrophied. The clavicles, ribs, and sternum are similarly affected. The abdomen is pendulous, while there is some lordosis in the lumbar region. There is profuse perspiration of a disagreeable odour.

On an average she passes eighty ounces of urine in twenty-four hours. It is usually neutral or slightly acid in reaction. The specific gravity is usually as low as 1012, although on one occasion it was 1024. The urea is on an average ·009 grammes per c.c. but 20·5 grammes per diem; in other words, the percentage of urea is below normal, but the total amount passed in twenty-four hours approaches the normal. On the other hand, she takes more than the average quantity of nitrogenous food, so that practically less urea is excreted than under normal conditions. Occasionally there is a little albumen, but I have never detected peptones nor sugar.

The most noteworthy feature about her urine is an excessive and persistent deposit of phosphates. As this deposit ceased when the patient was fed exclusively on milk, it is undoubtedly evidence of imperfect assimilation, and not of softening of the bones.

The headache, though persistent, is more so at one time than another, and there are intermittent pains in the limbs and joints.

The menstruation seems to have entirely ceased, but at irregular intervals of many months there are severe attacks of metrorrhagia. The patient is much given to masturbation. Intra-ocular pains are present, but the sight and field of vision are remarkably intact. There is also at times a complaint of pain in the right ear.

In association with this physical condition her mental symptoms are most interesting. Her sense of humour is very

highly developed ; but her spirits are dejected and her temper irritable. There is a constant feeling of lassitude and a strong desire to recline ; but though heavy and drowsy in appearance, sleep is disturbed. Until a few months ago she insisted on sleeping on the floor, as she said her bed was charged with electricity. She ascribes her headache, which of course we should refer to the pathological condition of the pituitary gland, to the presence of an electric battery in her head ; and to the electricity produced therefrom she attributes her intra-ocular and intra-auricular pains. She accounts for the pains in her limbs and joints by the spread of the electricity through her body. She indignantly denies she has a husband, and if any reference is made to him, flies into a fury. Her husband is alive, writes regularly concerning her, and says jealousy of him was a very early symptom in the case. When we reflect on the bitterness with which a woman once comely sees herself slowly degenerating into a hideous creature, we can appreciate these early suspicions which culminate in delusions. Her outstanding ugliness never fails to attract attention. As a result she is very distrustful with strangers, declines to converse with them, and is especially afraid of medical examination. At one time she heard voices at a distance, now she hears them underneath the floor. She asks me to go down and I shall see for myself the gang of ruffians who are plotting to murder her, and have introduced this electricity into her system. These auditory hallucinations arrive not only through her ears but also through her body by means of the electric wires, and are most intense by night, although they are also heard by day. The original delusions regarding gas have been replaced by delusions regarding electricity. The perversions of general sensibility cause the patient great distress. She has pains all over, feels as if people were constantly pricking her with needles.

She imagines every one is quite aware of her condition, and when asked about her hallucinations says testily, " I am sure you know well enough without asking me."

Finally, she has pronounced delusions of grandeur. She asserts that the asylum and the land around it belong to her ; that she has been left large estates in Ireland, and that she is possessed of great wealth. When the slightest doubt is cast on these assertions, she replies, " you'll see by-and-by." There is no

dementia. Her intelligence and mental acuteness are above the average of her class.

In this description of mental symptoms I think there is to be read a typical case of persecutory mania. And it is interesting to note that while the hallucinations are the insane interpretations of pains in the head, ears, and limbs, and alterations of general sensibility due to the acromegaly, that these are the identical hallucinations with which we are most familiar in cases of persecutory mania, of which the pathological basis is purely problematical. And still further it is to be observed that in this case there are in operation all those physical causes to which persecutory mania is by most recent writers referred. Mental causes are now believed to play an unimportant part in its production ; they act only indirectly by lowering the vitality.

The physical causes of persecutory mania are divided by Ritti into three classes. (1) Causes which act on the brain and nervous system. Of these we have here the implication and perversion of function of the pituitary gland, the exact significance of which we shall see later.

(2) Those causes which have their origin in the reproductive organs or in sexual life. In this case we have the early appearance of amenorrhœa with the subsequent attacks of metrorrhagia and masturbation.

(3) General causes of physical debility, such as insufficient nutrition. Acromegaly is essentially a disease of malnutrition. In short, this is a case of persecutory mania in which we may point to the direct physical causes.

Of the ætiology of acromegaly itself we are practically ignorant. In these cases, where an exciting cause has been suggested, alcoholism seems to be the most frequent. It attacks every race, males and females, nearly equally, and it may occur at any age ; but the majority are seized from twenty to forty years of age, although it most probably begins to develop shortly after puberty.

Of the diseases with which acromegaly has been confused, the two most common are myxœdema and hypertrophic osteo-arthropathy. This confusion is increased by the fact that acromegaly has been described in connection with both.

From the former it is differentiated by the fact that in acromegaly the bones are always implicated, while in myxœdema

there is no enlargement of the bones. In addition to this salient distinction, other points of difference are so numerous that a well-established case of acromegaly could now-a-days hardly be confused with myxœdema.

From hypertrophic osteo-arthropathy acromegaly is distinguished by the fact that in the former only the bony tissue is enlarged, and that especially at the articular ends of long bones, whereas in acromegaly both the bony and soft tissues are increased. Again, in hypertrophic osteo-arthropathy the symmetry of the hands is destroyed by enlargement, principally at the joints and ends of the fingers, whereas in acromegaly the hands and fingers are enlarged universally and symmetrically.

Both Marie and Souza-Leite point out that acromegalics are far from being giants. Yet the disease is frequently confused with gigantism. While there is no reason why acromegaly should not occur in a giant, it has nothing to do with the height of the individual. The majority of acromegalics are not above middle height—the case under discussion is only five feet one inch—while a perceptible diminution in size has been observed in some after the onset of the disease.

In the latest issue of the *Journal of Mental Science*, Professor Joffroy is said to have described a case of acromegaly, and to have considered gigantism to be the same disease as acromegaly, only occurring before adult life—that is, during the period of growth. I do not know Professor Joffroy's reasons for this contention, but I fail to see how the proportions of the limbs and face would preserve their relationships to each other before adult life any more than after. Some cases of acromegaly have been described before adult life. The appearance of gigantism is never that of acromegaly. Gigantism is only an exaggeration of a normal process; acromegaly is a true disease.

Dr. Middleton, of Glasgow, has described a case with trophic lesions of the joints, like Charcot's joint lesions in locomotor ataxy. In the same case Raynaud's phenomena occurred in a minor form, and there was a tendency to erysipelas. And in the forty-seven autopsies collected by Sternberg, of Vienna, in his recent monograph, and quoted by Furnivall, there was degeneration of the spinal cord in four, in Goll's column especially in two, in Burdach's column in one, and of the peripheral

nerves in one. Such are further indications of the profound trophic disturbance which must be at the root of the disease.

The structures to which most importance is attached in the pathology of the disease are the pituitary body, the thyroid and thymus glands, and the sympathetic nerve ganglia.

In the table of forty-nine cases compiled by Furnivall, chiefly from the collection of Sternberg, the sympathetic ganglia were observed in thirteen. Of these six were normal, six were hypertrophied, and one was hypertrophied with degeneration.

The thyroid gland was observed in twenty-nine cases. Of these only five were normal, thirteen were hypertrophied, while the others showed various forms of degeneration.

The thymus gland was observed in nineteen cases. It was found to be absent in seven, hypertrophied in three, persistent in eight, left lobe hypertrophied in one.

Cases of acromegaly have been described in which it is said that no change in the pituitary gland occurred. This is very doubtful.

In 1895 Professor Tamburini described a case of acromegaly, and discussed the pathology of the disease. Up till then, so far as he knew, only twenty-four cases were described in which post-mortems had been made. In seventeen of these, all of which were typical cases, a tumour of the pituitary was found. Out of the other seven he disposed of five as not having been cases of acromegaly at all. In the remaining two the disease had only been of brief duration, while the absence of structural changes was not established by microscopical examination.

In the whole of the forty-nine cases quoted by Furnivall, the pituitary gland was hypertrophied or the seat of a lesion. We may therefore conclude that the most constant organ to show disease in acromegaly is the pituitary gland. This lesion may take the form of hypertrophy, tumour, cyst, or other degeneration, and it is generally believed to be the most important ætiological factor. This constant lesion of the pituitary gland as a concomitant of acromegaly has brought that body into special prominence. It was, of course, known that it consisted of two lobes, of which the anterior is the larger, and concave behind where it embraces the posterior smaller lobe. It was likewise known that the two lobes are entirely different both in structure and development, yet their functions were practically unknown. Of late years some light has been thrown on this subject.

At the Annual Meeting of the British Medical Association in 1893, Andriezen read a paper giving results of researches on the morphology and evolution of function of the pituitary body. He showed that the subneural gland in larval Amphioxus is the analogue of the pituitary gland in higher animals and in man. He believes it to be a complex organ composed of three parts: (*a*) an anterior secreting glandular organ; (*b*) a water-vascular tube lined with ciliated epithelium and connecting the buccal cavities with the ventricles and the rest of the neural cavities; and (*c*) a posterior sensitive nervous lobe. The last two are well developed and functionate in ancestral vertebrata, but become obliterated and atrophied in function and structure in all forms above larval acraniates and Ammocœtes. The anterior lobe—the glandular secreting portion—is the type of a secreting structure of epithelial cells arranged in lobules and acini with many ducts opening into one principal duct. Its secretion is carried with the water-vascular stream through the central nervous system. The function of that secretion must be either trophic, acting on the nervous tissues, or destructive and neutralising waste products of nervous tissues.

In man the water-vascular system has given place to a blood-vascular, and the duct of the pituitary gland is closed. But the secretion of the pituitary is needed just as much after the closure of the pituitary duct and the cessation of the water-vascular system. The only difference is that the oxygen which was provided for the nervous system by the water-vascular system is now provided by the blood-vascular system. Hence the pituitary gland continues its secretion after the duct is obliterated and after it becomes ductless. The secretion is internal and absorbed by the lymphatics.

But it is not on the grounds of evolution alone that the function of the pituitary is believed to be that of internal secretion. In its microscopical structure the anterior lobe of the pituitary bears a resemblance to another internal secreting gland—the thyroid body, and a colloid substance like that in the thyroid vesicles is found sometimes in the alveoli of the anterior lobe of the hypophysis. Rogowitsch observed that the blood-vessels of the pituitary contain something besides blood, which he assumed to be colloid; Pisenti and Viola showed that it is colloid matter. Extirpation of the thyroid causes structural alteration of the hypophysis, and pathological

alteration of the latter has been found in cases of lesion of the thyroid. Louis Compte, the most recent writer on the relationship between the functions of the pituitary and thyroid glands, concludes from the examination of 100 miscellaneous cases that these organs act vicariously. Drs. Boyce and Beadles, in the *Journal of Pathology* for March, 1892, describe two cases of myxœdema with hypertrophy of the pituitary body, and in one of these there was a striking increase of pituitary colloid. Dr. Beadles reports three fatal cases of myxœdema in the *Journal of Pathology* for 1898, in all of which the pituitary body was above the normal size and weight.

In a case of myxœdema at present under my care in which the symptoms have only been kept in abeyance by the almost constant administration of thyroid extract, I have obtained the same result with pituitary extract.

Still further, experimental destruction of the gland has been followed by notable results. The organ has been successfully removed both in dogs and cats. In all cases of complete removal death results, usually within a fortnight of the operation. The symptoms observed are (1) a diminution of the body temperature; (2) anorexia and lassitude; (3) muscular twitchings and tremors developing into spasms; (4) dyspnœa. Many of the symptoms show abatement after the injection of pituitary extract. The investigators Vassale and Sacchi conclude that the pituitary must furnish an internal secretion which is useful in maintaining the nutrition of the nervous and muscular systems.

But although the pituitary and the thyroid glands are to some extent vicarious, they are certainly not identical. For just as the disease associated with perversion or suppression of function of the pituitary differs in its clinical features from myxœdema, so do the effects of experimental injection of the extracts of pituitary and thyroid materially differ.

Thyroid extract causes dilatation of arteries and consequent fall of blood pressure without diminishing the heart's beat. Pituitary extract increases the contraction of the arteries and the heart, giving rise to marked increase of blood pressure. Moreover, in myxœdema thyroid extract is of the greatest benefit; in acromegaly it is of little value.

According to Shattock there is considerable ground for believing that both glands have more than one function, but

that they have at least one in common, namely, their colloid-producing capacity.

The two glands are vicarious only as to what they have in common, and thyroid and pituitary extracts can be of service in disease of the converse gland only *pro tanto*.

Virchow suggested that in acromegaly we have described only half a disease—the latter and degenerative half. This does not seem improbable. For although in a case recorded by Duchesneau progressive muscular atrophy preceded the development of the acromegaly, some cases in the beginning seem to have an increase of muscular power.

Such a state of matters might possibly mean that there is an increase of secreting cells in the pituitary with consequent increase of function during the period preceding degeneration. And so in the treatment of the disease there would be a period when pituitary extract was contra-indicated as well as a time for its administration. Just as in the treatment of Graves' disease, which is believed to be due to a hypersecretion on the part of the thyroid gland, the thyroid treatment has been found to aggravate rather than to allay the morbid phenomena, as opposed to its great value in myxœdema, in which the thyroid is shrivelled or completely atrophied.

The treatment of acromegaly has been so far chiefly symptomatic. Pituitary and thyroid extracts have been tried in many cases, but with very doubtful results.

Thyroid extract is not entirely useless. Its most constant effect is to reduce the body weight, and it may produce slight physical and mental improvement, as in the case reported by Dr. Neal.

Treatment by pituitary extract seems to have been rarely tried. In a few cases negative results have been reported.

Cyon, however, on the 28th November, 1898, communicated to the Paris Académie de Médecine a contribution to the treatment of acromegaly by hypophysin. He reported the case of an obese acromegalic in whom seven weeks' treatment diminished the weight by nine kilogrammes, and the circumference of the abdomen by 35 cm. The pulse became regular, and the headache, nystagmus, and intellectual apathy were improved.

Last September I began giving the case under my care pituitary extract. During the first month 7½ gr. per diem were

distributed in three doses. The amount was then increased to 15 gr., and after a fortnight to 19¼ gr.

The first pronounced effect was a severe onset of metrorrhagia accompanied by hæmorrhage from the bowel. This passed off in a few days, and a marked improvement in the patient's condition set in. Her irritability and drowsiness almost vanished. She went to bed willingly and slept all night. She became very amiable and useful in the hospital, while she developed great ingenuity and activity in making and dressing dolls. She was induced to go to entertainments, and began to read solid literature.

The month before treatment was commenced she weighed 12 st. 3 lbs.; one month after treatment was begun, 11 st. 11 lbs.; two months after treatment was begun, 10 st. 7 lbs. At the end of two months the extract was withheld, and she began to increase again in weight.

A few weeks after treatment was begun her urine was found to be reduced in quantity from an average of eighty ounces per diem to fifty-nine. There has been no diminution in her appetite, and she has menstruated about once a month since treatment was begun—a condition which has not existed since her disease began many years ago.

Encouraged by these results, I have tried the effect of pituitary extract on two cases of myxœdema. In one severe headache and sickness occurred, so it was promptly stopped. In this case, too, thyroid extract appeared to have no effect. In the other, which has been previously referred to, the patient said she derived great benefit, and it certainly appeared to act as a physical and mental tonic. I have tried the effect of pituitary extract on several cases of insanity, but as a rule with negative results. In one case at least, in whom insanity was associated with irregular and scanty menstruation, mentalisation became less sluggish, dirty habits ceased, the patient began to read and play on the piano, her menstruation became re-established, and her general improvement was marked.

Acromegaly appears to be extremely rare in asylums; in fact, the only other undoubted case I know to have been in a British asylum died at Colney Hatch in 1885. It was under the care of Dr. Robert Jones, who was medical officer there, and, although the disease had not then a name, yet Dr. Jones's

clinical and post-mortem notes at the time leave no doubt of its nature. It has been reported by Dr. Beadles.

From the Continent two cases have been recorded, to both of which casual reference has already been made. One of these occurred in an Italian asylum under Professor Tamburini, another in a French asylum under Professor Joffroy.

The problem of acromegaly is still unsolved. But, despite its rarity in asylums, its future physiological developments will be fraught with interest as great for the mental physician as for any other class of medical men.

Discussion

At General Meeting, Chester, 1899.

Dr. Robert Jones said he had charge of a case in 1884, just a year before M. Marie described the malady. There was then much uncertainty as to the exact diagnosis. He got several of his colleagues from St. Bartholomew's to see the patient. The woman was distinctly ugly. She had thickened lips, a large lower jaw, a very dull look, and frequently complained of rheumatic pains. She passed large quantities of urine. No one was able to give the disease a name. The patient eventually died from gastric hæmorrhage, and a very marked tumour was found replacing the pituitary body. Since then two hundred cases had been reported. The last he saw was a man in the Isle of Wight, at Ryde, who he believed was still at his occupation in a bicycle shop. As Dr. Blair said, there were probably more cases outside than inside asylums. He thought it was borne out by experience that the most constant change was observed in the pituitary body.

Dr. Wigglesworth said it was somewhat doubtful whether the insanity was in this case dependent on the acromegaly or on previous alcoholic intemperance, which last was a very much more common cause. As far as he knew there had been hardly any similar cases recorded. There was no doubt that the pituitary body had been found diseased in a large number of cases, and the conclusion had been reached that that was the cause of the disease. He thought the proof of that was not yet complete. They had negative cases as well as positive. He remembered a case in which the pituitary body was extensively destroyed by a tumour of slow growth, yet there was no acromegaly.

Dr. Mercier said it might be true that the pituitary body might be diseased without acromegaly, yet for all that acromegaly might be the result of a particular pathological affection of that body. They knew that defects in the supra-renal bodies might occur without the ordinary appearances of Addison's disease; but they knew that Addison's disease was invariably associated with and dependent upon a defect of the supra-renal bodies. He should be glad to give the members of the Association an opportunity of seeing a typical case of acromegaly at no great distance from Dartford.

Dr. Nicolson said that he would be most interested to know whether the condition that gave rise to the enlargements arose from the existence of some specific detrimental material supplied to the tissues, or from the want of some corrective material in the nutriment of those particular tissues. By getting at the commencement of the destructive changes of the pituitary body, and by investigating the peripheral portions where the enlargement took place, they might be able to find out cause and effect.

Dr. Campbell said that he had seen two cases of tumour of the pituitary body. In neither were there acromegalic changes, but he had no desire to criticise the views expressed.

Dr. Whitcombe said a case came under his notice lately: a young man 28 years of age, who was an epileptic, and whose disease was diagnosed before admission to

the asylum. He certainly was in the early stage of this disease, as his appearance entirely concurred with that which they had heard from Dr. Blair. He regretted that post-mortem examination could not be obtained.

Dr. BLAIR, in reply to Dr. Wigglesworth, said it was very difficult to find out exactly whether the woman drank to excess or not. They had information that at times she was a little intemperate; but he did not think her insanity was due to alcoholism. Acromegalics nearly always in the end became demented; but he did not know of any other case in which there had been an acute form of insanity.

A Degenerative Form of Syphilitic Insanity, with Clinical Types. By G. A. WELSH, M.D., Assistant Physician, Crichton Royal Institution, Dumfries.

As an introduction to this paper I have detailed three cases as clinical pictures. My conclusions are based on an examination of sixteen cases, six of which proved recoverable. Case No. 1 is an example of recovery and illustrates the condition found; but it presented no congestive attacks, which sometimes occur during the course of such a case. Cases Nos. 2 and 3 show in addition confirmed muscular and degenerative lesions precluding any chance of recovery; in both, however, there were distinct remissions.

Before passing to general considerations I have formulated in a few sentences the points to be considered. This malady is a degenerative condition of the nervous system primarily attacking the nerve-cells. It closely resembles general paralysis in its clinical manifestations. The progress, however, shows that in some cases the disease is curable; in others, which do not permit of cure, alleviation in the form of remissions can be obtained by antisyphilitic treatment. These cases which progress follow closely that progressive degeneration known as general paralysis.

In studying this form of nervous degeneration the first question to be considered is, "How does the virus act in producing the nervous disorder?" The clinical phenomena give evidence of a degenerative process, and point to the presence of an irritative lesion of nerve-cells (mental and motor). What then is the irritant, and what is the *modus operandi?* The irritant, I believe, is a toxine produced by syphilis; and in using this term toxine I have done so in its widest significance. The evidence

of toxine formation in syphilis is shown by the clinical manifestations of the disease, more conclusively in the non-nervous and early lesions which are infectious by the glandular secretions than in the late and non-infectious lesions. It may be that the toxine through time changes its composition, losing its infective power, while it retains its virulence for the already infected organism. This toxine, whether it be a toxalbumin, an albumose, or a ptomaine in composition, is a highly noxious substance, and prevents and perverts healthy cell life in the various tissues of our economy.

The question of the action of irritants on nervous tissue calls up a large field, and to put it shortly we find that the substance may be introduced from without, *e.g.* alcohol, cocaine, morphia, &c.; or it may be formed within, *e.g.* toxine formation in influenza, diphtheria, beri-beri. It matters not whether it is an introduction from without or a formation within, the common action of an irritant is always present, though the manifestation, degree, and ultimate end may vary.

Dr. Marinesco in his recent experiments has proved that there is a selective affinity manifested by irritants; certain toxines act on certain cells, and have the power of singling out different parts of the chromophile elements for their special action.

I cannot at present venture any opinion about a selective affinity for any special part of the chromophile arrangement on the part of the syphilitic virus; all I am able to state is that it affects mental and motor cells.

Before proceeding further I want to make clear, 1st, that this is a manifestation of the tertiary stage; 2nd, that it is a degenerative lesion, and one distinct from formative change. The formative lesions have their origin in the mesoblastic connective and supporting structures, including the blood-vessels; the degenerative attack the specialised tissue of the parenchyma.

This brings me to consider briefly some points which have a bearing on the question of cell degeneration, and which I shall describe under the heading of "The Specialisation of the Cell." It is well known that when a part of the parenchyma of the brain becomes destroyed it is not reproduced by division of the healthy cells; the loss of tissue is largely compensated for by an hypertrophy of the neuroglia and connective tissue. This is

proved by the microscopic appearances in general paralysis, and in cases where the process has been acute and has caused destruction of cells. In these cases we find that the number of cells is diminished, that many of the cells are atrophied, and that there is a hyperplasia of the neuroglia and connective tissues. This, we find, is the general law governing all specialised tissue ; there is no replacement of destroyed cells. When we consider the process of disease in a tissue which is not specialised, *e. g.* the various connective tissues, we find that the cells not affected by the disease reproduce and multiply to form a tissue similar to that destroyed. The conclusion we draw is that when there is cell specialisation the vegetative function of reproduction is replaced by the special function which the cells take on ; surely we have a pre-eminent right to say that this is true of the highly specialised tissue which forms the nervous system. This is the conclusion M. Marinesco has come to about the brain cell ; his idea is that in acquiring its special function the nerve-cell has lost its vegetative faculty of reproduction.

It could not be otherwise, because, stored in these cells, we have our ideas and memories, and if they were constantly dividing and multiplying, these memories and ideas would indeed have a precarious existence. Clinically we find that when destruction of nerve-cells occurs in the motor areas, and still more so when it takes place behind these areas in the sensory part of the brain, it causes permanent impairment in the form of mental weakness, with its accompaniments—loss of initiative ideas, control, and in many cases loss of memory.

The important points next to be considered are arrest in the process, and progressive degeneration. When once a process of disease produces a gross or permanent change in the nervous system, owing to the intimate correlation of its component parts, and its sympathetic and sensitive structure, it necessarily is progressive, and spreads to a greater or less degree. If it can be arrested, or if it be checked, by the *vis medicatrix naturæ*, and does not go on to a gross or permanent change, the tissue may and can recover its wonted vitality. There is no question of a production of new tissue to compensate for the destroyed cells : it is a case of life or death of the affected cells. In syphilitic degeneration of nerve-cells arrest is the exception rather than the rule, and only rarely do we get it ;

still I have seen and heard of undoubted cases, and some explanation is required. The resistive power of the cells must be considered, the intensity of the virus, the question as to whether it is in action alone, and the general state of the nervous system ; but in all cases the personal equation comes markedly before us, and it is next to impossible to say whether or not a case is going to recover. The resistive power of the cell is lowered by many factors. First, by what I have called a slow degeneration. This depends upon the presence of the toxine, and it is highly probable that it is a chemical and molecular alteration. To explain this slow degeneration in the case of the spinal cord, Edinger has advanced a theory. He says that those parts of the cord which, being constantly in use (muscular sense, equilibrium, motion), undergo most waste and repair, are more readily affected by anything that tends to interfere with such repair—for example, a syphilitic toxine. Their frequent use will, with such interference, lead to exhaustion and decay. I would apply the same theory to the nerve-cells in the brain ; the toxine interferes with the chemical changes in the protoplasm of the cell, and causes slow degeneration. There seems to be no particular affinity for the cells it attacks, motor and sensory cells alike suffer from its action. This seems to be proven in the lower trophic realm by the sensory ataxic and spastic symptoms found in cases with spinal lesions.

Second, the intensity of the virus. Syphilis is an uncertain creditor, in some cases exacting slightly and in others exacting to the full.

Third, the question as to whether it is in action alone. I believe that syphilis can of itself produce nervous disease, but that the cases where it does so are rare ; generally we find that we have to do with both syphilis and alcohol, especially in the degenerative variety. This combination of toxines is bound to be a more serious matter.

Lastly, the general state of the nervous system. By this I mean the presence or absence of confirmed change, *e. g.* vascular change in the larger vessels, and tract degeneration in the cord or in the optic tracts. A pathological change of this nature in the nervous system is of the highest importance, because of that perfect connection which causes co-ordinate action, and because of the tendency to a far-reaching degenera-

tion. This fact is prominently brought before us in gross changes, because we have a pathological basis and connection, and are able to follow centripetally or centrifugally from the seat of the lesion the changes known as nervous degeneration. The existence of such a change of necessity almost precludes any chance of permanent recovery, and makes for progressive degeneration.

The other pathological conditions of microscopic vascular and neurogliar change I mention to show that I have them in view. They are not, to my mind, of primary importance, being results of the cell change rather than causes. It may be mentioned, however, that small cortical softenings, the result of ruptures of miliary aneurisms, are sometimes found. These rank as being on the border-line, and as producing permanent change.

Having finished these considerations, I can now pass to the study of the condition when an actual breakdown has taken place. This is ushered in by an active change, with signs of cerebral irritation and congestion. The length of time the toxine has been in action before the active change takes place is, with our present knowledge, impossible to state, but there are modifications in the clinical appearances which lead me to think that it must have been for some considerable time. How long I cannot say definitely; months certainly, and in some cases years. This brings me to an interesting though difficult question to settle, viz. "What is the part which the toxine plays when the active change is set up?" There is no reason to doubt that it is still in action, but I do not think that its action is so important. It may be that the active change acts as a break in the process of slow degeneration, and if resolution takes place, permits of cure, because there is no doubt that those cases subacute in origin and course, invariably pass into a progressive degeneration. I do not think it likely that this change owes its continuance to the action of the virus; rather I incline to the view that here we have an active change in nerve-cells, already damaged, which cannot and does not subside for a considerable time in recoverable cases. The casual factors concerned in the active change seem to be added to the toxine, the result being produced by a combined action. I have enumerated them as alcohol, sexual excess, mental worry, and brain exhaustion. In none of the cases

I have seen could all of these be eliminated, and the question to be decided is, "What part do they play?" We must study their action, first, in the relation to the nerve-cell; second, in relation to the blood-vessels. All act as stimulators and irritants of nerve-cells, and if we take alcohol as an example, we can formulate points common to the others. Speaking generally, its action on the cerebral cells is to produce an inhibitory and paralysing effect on cell metamorphosis. By such an alteration a condition of auto-intoxication is set up, which explains the irritating and stimulating action. The smaller capillaries become dilated, and congestion of the part follows.

This brings me to the question, "What is the pathology?" I have already stated that I believe there are two stages, 1st, a slow degeneration; 2nd, an active change; but beyond this at present I cannot go. In recoverable cases the observations have to be clinical, and in those which progress death rarely takes place till an advanced stage of degeneration is reached. It is not improbable, from Dr. Marinesco's recent experiments, that the active change is ushered in by a chromatolytic process, but this takes me into the field of hypothesis and away from definite pathology.

Before passing from this, however, there is one other point requiring mention, viz. "that there is in syphilis a strong tendency for the *vis medicatrix naturæ* to assert itself and produce a spontaneous cure: this fact forms a strong adjuvant to medical treatment."

Lastly, there are certain aspects and phenomena which are purely clinical.

The term syphilitic insanity, as applied to degenerative cases, is condemned by many authorities, but there are certain considerations, especially the results of therapeutic treatment, which I think justify the inclusion of these cases.

Heredity.—What is the relation of heredity? I think it is indirect, and is best explained by saying that the patient has a neurotic temperament, or, better still, that he is of the neuropathic diathesis. The person shows a predominance of nervous energy; he is intellectual, cultured, and fond of any pleasure which requires mental energy and activity. The nervous system, in his economy, is the one where pressure is always high, and where a breakdown is most liable to occur if the

process of repair is in any way interfered with. His nervous system is highly sensitive, and reacts in a marked manner to any outside stimulus.

Symptomatology.—The symptoms found are distinctive. The disease is one which admits of definition, and may be defined as a disorder of the nervous system, characterised by mental symptoms with motor accompaniments. In every case there are motor accompaniments, and I do not consider that without them the case can be included in this form. The mental condition is that of exaltation with excitement, and might well be called syphilitic mania.

The premonitory stage is short in duration, and in the cases I have studied varied from ten to twenty-one days. It is marked by a change in manner, irritability, eccentric acts, restlessness, and insomnia. It varies greatly in the intensity of its manifestation, and in some cases is so slight that it passes without attracting attention.

The stage of invasion is acute in its onset, and is characterised by mental exaltation with delusions of grandeur, and in some cases, in addition, with delusions of suspicion and persecution. This mental manifestation is described by many authorities (Savage, Meikle) as a rare condition. Some differentiate between the grandiose delusions found in syphilitic disease and those found in general paralysis, but in the cases I have seen no difference in the nature or character of the grandiose ideas could be detected. The delusions of suspicion and persecution play a secondary part, and merely corroborate the fact that they are commonly found in the insanities of toxic processes. Of the other mental manifestations which also occur in ordinary cases of mania there are certain which require special note. 1st. Sleeplessness. 2nd. The degree of mental enfeeblement. 3rd. The variability and alternation of the mental condition. 4th. The occurrence of remissions.

Sleeplessness with restlessness and uneasiness is generally marked, especially in the early stages. This shows that the cell change and capillary engorgement are active. It is a symptom which requires active treatment, as its continuance is bound to aggravate the cortical condition. To put it shortly, the sleeplessness is caused by the active condition, but its continuance means a fresh irritant to the already damaged cells.

The mental weakness is marked in every case from the beginning, and is out of proportion to the duration of the acute change. It shows itself in the extravagance of the delusions and the facileness. Impulse is considerably modified, the mental element of the mento-motor act is strong, but the motor is weak, and what the patient does is to talk much and do little. I have not seen one case where it was a suicidal impulse. It is interesting to note that in simple acute alcoholic mania suicidal impulse is common; in this disease, where alcohol frequently acts as a causal factor, we do not seem to get it.

Two explanations may be put forward to account for this modification of impulse: 1st, the syphilitic factor may modify it; 2nd, it may be due to the paretic motor condition found.

The variability of the mental condition is a prominent feature. It varies from a passing instability to a marked alternation; a period of excitement lasting for days or weeks is followed by a period of depression. This condition I find helpful in forming a diagnosis.

The Occurrence of Remissions.—Periods of remission occur during the course of curable cases. They are, however, more marked in those progressive cases under antisyphilitic treatment, and show the beneficial result of that treatment. In such a remission I have known a professional man carry on his work for six months.

Motor Signs.—They are invariably present, and show a paresis of motor power and a diminution of reflex excitability. Diminution of kinetic power is a marked contrast to the active mental state, and is not what we expect. The actual conditions I find are—1st. Paresis, local or general. 2nd. Paretic incoordination, which, as a rule, is limited to the lower extremities but sometimes affects the upper. 3rd. Absence or diminution of the knee and other tendon reflexes. 4th. Muscular tremors, and defective articulation of speech in the form of paretic slurring. 5th. Regular congestive attacks sometimes occur during the course of the attack.

Sensory phenomena are conspicuous by their absence.

Pupil Changes.—In the recoverable cases the pupils remained equal; they reacted to light, and accommodation was normal. Pupil inequality with irregularity or absence of reflex contraction I found an invariable sign of a localising condition or of progressive degeneration.

Differential Diagnosis.—There are three conditions which may be confused: 1st. General paralysis. 2nd. Simple acute alcoholic mania. 3rd. Syphilitic degeneration.

The differentiation from general paralysis is in most cases impossible for a considerable time. A study of the course of the case with the signs and symptoms I have stated and the result of antisyphilitic treatment will generally within six months make a diagnosis possible.

The points I have been led to consider important are—1st. The acuteness of the attack. 2nd. The degree of mental enfeeblement. 3rd. The variability of the mental condition. 4th. The character of the motor phenomena, with the absence of sensory phenomena and pupil changes. 5th. The deciding test of vigorous antisyphilitic treatment.

The presence of congestive attacks is not diagnostic of general paralysis. I have studied the records of two cases in this institution who had frequent congestive attacks for the first four months of their illness, and yet who recovered with antisyphilitic treatment.

In acute alcoholic mania you get marked hallucinations of hearing and sight, and the diagnosis becomes clear in a month's time.

Prognosis is very doubtful; these cases are always grave. It depends upon the developments in the course of the case and the result of antisyphilitic treatment.

Treatment.—Of the various antisyphilitic remedies potassium iodide is the most useful, and is followed by the most successful results.

I begin with a dose of fifteen grains three times a day, increasing or diminishing according to the requirements of the case. This treatment is apt to lower the bodily weight, and it is probably best to substitute tonic treatment every third week.

The bodily weight should always be maintained by nutrient diet, cod-liver oil, malt extract, &c. I find that the cases that lose weight in spite of nutrient diet, &c., invariably progress into paralytic degeneration.

CASE 1. *A Typical Case of Syphilitic Insanity, simulating General Paralysis, ending in Recovery.*—A. B—, æt. 36, admitted September, 1895.

Previous history.—An attack of syphilis many years ago.

Disposition.—He has a frank and kindly disposition, and is hard-working. Neurotic temperament.

Habits.—Loose ; he is given to sexual and alcoholic excesses. No hereditary predisposition. No previous attacks.

Causation.—Predisposing—syphilis with sexual and alcoholic excesses ; actual exciting—mental worry.

History of the present attack.—The attack was acute in its onset, and is of ten days' duration. It first showed itself by exalted ideas, excitement, and noisy demonstrativeness.

Physical signs.—Muscular tremors with loss of the knee reflexes.

State on admission.—He has various exalted ideas, *e. g.* he says that he owns hundreds of horses, that all the charitable institutions in Dublin are run by him, and that the Queen is under his power. He is in a state of mental excitement ; his memory is good, but his utterance is aphasic, and he is occasionally incoherent. He can answer most questions put to him, and shows a marked degree of mental enfeeblement. In appearance he is tall and thin ; pupils are equal, and react normally to light and accommodation. Muscularity is fair, but there is loss of fat over the body. Nervous system motor. Muscular tremors of the face and skeletal muscles. Knee reflexes are absent. There are no sensory phenomena. Circulatory and respiratory systems healthy. Appetite is good, tongue clean and moist, bowels regular. Urine acid, sp. gr. 1024. No abnormal constituents. Height 5 ft. 10 in. Weight 10 st. Bodily health as a whole is reduced.

Notes on the Progress and Course of the Case.—September 14th, 1895.—Patient slept well last night, and is less excited. The excess of motor energy shows itself by his degree of talkativeness, the tremor is less marked, and he can articulate many test words with perfect utterance.

15th.—He was noisy last night, and did not sleep so well. This morning he is talkative, exalted, and excited, says he owns one million pounds sterling, keeps a harem, and is all-powerful. During the day he got very depressed, and prayed that God would have mercy on him.

16th.—He spent the night singing and shouting, and is still excited and has periods of depression.

19th.—His ideas are still exalted and his conversation erotic, but he is quieter and less demonstrative. He is being treated

by tonics and nutrient diet with open-air exercise. He is quieter and sleeps better at night. His habits are very dirty.

24th.—He still has many delusions of grandeur, is incoherent, and has confusion of ideas. He is quieter and sleeps well at nights. Has become more cleanly in his habits.

October 24th.—He is improving slowly, is quiet and less excitable. In his general conversation he is incoherent, but when drawn up sharply he can pull himself together and talk coherently. His power of attention and of fixing his ideas is very limited, however, and after talking coherently for a short time he becomes confused in his ideas, and is again incoherent. He has passing attacks of depression.

November 10th.—He is becoming more rational in his conversation and actions, but still has occasional relapses in which he talks in a grandiose manner. His mental state varies greatly, and he has frequent attacks of depression. The motor signs have been slowly improving, and are now only present in a slight degree.

26th.—Since last note the motor signs have completely disappeared, his grandiose ideas are less marked, and the delusional tendency is slowly passing off. From this time onward he slowly improved and recovered from his delusions, day by day becoming clearer in his mental processes.

In July, 1897, he was visited by his friends, who saw so much improvement that they insisted on taking him away, although Dr. Rutherford warned them that he would most probably break down.

When he left there was a trace of mental weakness and an excitable tendency: his bodily health has greatly improved; weight is 12 st. 2 lbs.

He remained in an unstable state for two weeks, then relapsed and had to be readmitted.

State on readmission.—He is mentally exalted, has many grandiose ideas, is excited, restless, confused in his ideas, and incoherent. His memory is now affected, and he can only answer a question imperfectly. In appearance he is healthy-looking and well nourished. Pupils are equal; they react to light, and accommodation is normal.

Nervous system.—Motor co-ordination is affected; he is ataxic in his gait, and cannot co-ordinate to write. The structures concerned with articulation are implicated; his speech is

indistinct and slurring. No sensory phenomena. Knee reflexes are absent.

August 12th, 1896.—He is restless and excited, sleepless at nights, and inclined to injure his hands by beating them against the walls of his room.

15th.—He continues in the above condition. Treatment, nutrient diet and potassium iodide, grs. xv, t. i. d., with carriage exercise.

September 1st.—He is quieter, less excitable and incoherent. There is marked mental weakness ; he is very childish in his talk and actions. Motor signs are unchanged. He has a good appetite, and is beginning to sleep well at nights. Syr. Eastonii ʒss, t. i. d., substituted for potassium iodide.

30th.—Patient is improving, he has more initiative, talks rationally, and takes a greater interest in his personal appearance. His speech has improved, and only shows a slight defect in articulation ; the other motor signs are stationary. Iodide continued again.

October 12th.—He can now write fairly well, and is slowly improving.

From this time he improved more rapidly, the mental weakness and delusional tendency passed off, he became coherent, and his memory improved. His motor signs passed away ; the power of co-ordination for speech, walking, and writing returned. In four months he could co-ordinate to walk and write perfectly. Speech was a month longer in improving.

April 13th, 1897.—His friends to-day removed him on probation. He is greatly improved mentally, but is still unstable and excitable ; when excited he is aphasic.

October 16th.—To-day certified as being sane. There are no motor phenomena.

Subsequent history.—In the beginning of 1898 he resumed his professional duties, and has shown no return of the disease.

CASE 2. *Syphilitic Insanity with Vascular Change and Localising Signs, ending in Progressive Dementia.*—A. C—, æt. 50. Admitted October 24th, 1896.

History.—Patient has a distinct history of syphilis, confirmed by his family doctor. The facts point during the whole course of the case to vascular degeneration. At the age of twenty-three he had an attack of paresis (with the symptoms of throm-

bosis) of the right side. He was recommended a sea voyage, and the paresis gradually, after twelve months' interval, passed off. From that period until the present attack of mania he has been what his friends termed eccentric. He was restless, could not settle, spent his time taking long walks (on an average thirty miles a day), playing billiards, cards, &c., and was intemperate in his habits.

History of the present attack.—It is of eight days' duration, and first showed itself by delusions and impulsiveness. He imagined that his food was poisoned, and stated that when the impulse came on he would have killed his mother, brother, or sister as opportunity offered. He was excitable, restless, incoherent, and stated that he had been insane for many years, but was now of sound mind. Disposition: he is of the nervous diathesis, of loose habits, and intemperate. Causation: predisposing—syphilis and vascular degeneration; exciting—alcohol. No previous attacks and no hereditary predisposition.

State on admission.—Patient has marked mental weakness, so much so that it masks and modifies greatly his exaltation and excitement. His memory is defective, but he can answer simple questions coherently. He is a stout, well-built man, with an enfeebled and stupid expression; his muscularity is good, there is an excessive deposit of fat in the subcutaneous tissues. Pupils are equal; they react to light, and accommodation is normal. Nervous system: the motor signs are limited to slight unsteadiness in gait and diminution in the knee reflexes. No sensory phenomena. Special senses: speech is slurring and indistinct; he is so weak mentally that the usual test words cannot be tried. Heart and lungs healthy. Appetite good. Tongue brown and furred. Bowels constipated. Urine acid, sp. gr. 1028. No albumen or sugar. Height 5 ft. 7 in. Weight 12 st. 11 lbs. Temperature normal, 98·4°.

November 1st, 1896.—Continues in the condition described on admission. He is noisy, restless, incoherent, stupid, and greatly weakened in mind; his memory is defective, he has no idea when or how he came here, is untidy and dirty in his habits.

December 1st.—Enfeeblement progresses, he is more confused and stupid, speech is very indistinct. He sleeps badly, and is noisy and restless. From this time till the end of

March, 1897, he became more demented ; on December 22nd he developed a hæmatoma auris on the left side with more than a usual quantity of effusion ; on the right side there was chronic thickening of the aural cartilage.

Towards the end of December the left pupil became widely dilated, and left-sided ptosis developed. He was so restless on many occasions that sulphonal in ten-grain doses was administered ; this drug, given at intervals, was stopped at the end of February.

He continued restless and noisy for six weeks, and then came a remission in which he brightened up. Treatment by anti-syphilitic remedies was of no avail.

April 9th, 1897.—To-day for the first time since admission he began to talk, his expression became brighter, he showed more co-ordination in his actions, but still remained restless. His weight has fallen to 152 pounds.

12th.—Close examination for the last three days shows that his vocabulary is very limited, he has a tendency to repeat day by day what he says. He was so sensible that I was able to test his speech and writing. His writing shows no defective formation of letters, and he spells correctly what is asked of him. As regards his speech there is no defective articulation or syllable stumbling when he echoes, but when he tries to produce speech there is distinct slurring.

June 12th.—Progresses towards complete mental enfeeblement; his speech has become more distinct, but his vocabulary is very limited ; he can whistle a tune or sing a song accurately. He is still restless and excitable, and requires an occasional dose of sulphonal.

There is nothing of note in his case till September, when a paroxysmal cough developed, and on examination of his chest, early phthisis at the left apex was discovered. The dilatation of the left pupil and the ptosis are stationary. Weight 153 lbs.

Under tonic and nutrient treatment his physical health improved, cough disappeared, and no fresh symptoms obtruded themselves till December, when he developed a hæmatocele of the right testicle. On careful examination the conclusion that it was idiopathic, and not due to injury received, seemed the most probable diagnosis. No history of injury or shock, the usual concomitant of testicular injury, could be found ; the

effusion was large in amount, and probably came from some ruptured vessel.

1898.—Under treatment by rest, support, and inunction of mercurial ointment the effusion became absorbed in three weeks, and an examination then showed that the body and epididymis were enlarged and indurated; the cord also was enlarged. In another month this disappeared, and he improved mentally and became brighter and quieter.

An examination of his urine from time to time showed that he had glycosuria, alternating with bile in the urine; the urine was not excessive in amount, and there was no albumen. In February his enfeeblement had passed into quiet dementia, and there was no change or fresh addition to the motor symptoms.

April 10th.—Continues as above, no change to be noted.

General considerations.—First, in the history the confirmed presence of syphilis with the attack of left-sided hemiparesis. Recovery from the motor symptoms with continuance and progression of the mental weakness. Second, an acute attack of mania with impulsiveness occurring twenty-five years after, with mental enfeeblement to such a degree as to mask the other evidences of his mania. Third, the progress and events in the case pointing to vascular degeneration. Fourth, the presence of speech symptoms. Fifth, a distinct remission, in which the speech symptoms improved and finally disappeared. Sixth, the occurrence of left-sided ptosis, and dilated pupil on that side. Seventh, failure of treatment by antisyphilitic remedies. Eighth, the stationary condition of the motor symptoms.

CASE 3. *A Case of Syphilitic Insanity, Progressive in Character, showing a Remission.*—A. D—, æt. 31.

Previous history.—There is a distinct history of syphilis, with the prominent symptom of severe headaches, which were so violent that they incapacitated him from work.

Disposition.—He was naturally clever, and had worked very hard. He was self-reliant, had a sanguine and happy temperament.

Habits.—Loose; no trace of an alcoholic tendency. No previous attacks, and no hereditary predisposition.

Causation.—Predisposing—syphilis; exciting—hard and anxious professional work.

Primary symptoms.—Mental: the first mental symptoms

were change of manner and irritability, following this an attack of mania with grandiose ideas. During this attack he went about ordering large quantities of silly and useless things. The orders he gave were excessive and far beyond his means. To what extent he went may be gauged by a remark of his mother, when he was about to be discharged recovered. "Do you think," said she, "that people will ever have confidence in him again, and employ him in professional work? he did such silly and extraordinary things when he took ill."

Physical: then there were observed some of the physical signs of locomotor ataxia; for example, the peculiar way in which he walked. He was sent away for a month's yachting, but no signs of improvement were seen, rather the contrary; he became restless, developed fresh delusions of grandeur, wrote continuously under the impression that he was a great author, and was sure of a fortune by his writings. He sent the writings of that month to his friends to be published, and developed the delusion that he was fabulously wealthy in consequence. This was thoroughly worthy of a general paralytic, because he stated that although he knew they could not yet be published, still he had received untold wealth for them. Other ideas followed, he gave away what he called cheques for hundreds of thousands of pounds to all his relations and to various charities, and said he was soon to be made Lord Chancellor of Ireland.

State on admission.—He has an extremely self-confident manner and bearing; has delusions of grandeur. With this exaltation there is marked mental weakness. When his ideas were questioned, his emotions overcame him, and facileness took the place of confidence, he smiled placidly and sillily as he declared that these things could not be otherwise.

Memory is good. He is coherent, and can answer questions sensibly and accurately. The delusions described before still exist strongly.

In appearance he is a thin, spare man, with a pale skin, blue eyes, and a fair complexion. His pupils are irregular, the left being the larger. Reaction to light and accommodation are lost. Nervous system, motor: there is loss of motor power in the lower and upper extremities. He has an ataxic gait such as occurs in locomotor ataxia. The Romberg sign is present, and he cannot co-ordinate to walk along a straight

line. Co-ordination is impaired in the upper extremities, Sensory: sensation to touch and common sensibility are blunted in a marked degree. Reflexes · knee reflexes are absent; the plantar reflexes are normal; the cremasteric reflex is lost on the left side; the abdominal reflex on the left side is diminished. Special senses: speech is not affected; hearing, taste, and smell are normal; vision is not affected. Respiratory system: healthy. Circulatory system: pulse rate 108 per minute; regular in force and time, tension low, vessel walls healthy; heart sounds are weak, but there are no murmurs. Alimentary system: appetite good; tongue is coated and moist; there is diarrhœa from a paretic condition of his sphincter muscles. Urine acid; specific gravity 1030; no abnormal constituents. Temperature 98·4°. Height 5 ft. 10 in. Weight 9 st. 3 lbs. On the whole his bodily condition is not good.

September 19th, 1897.—Patient talks in an off-hand way about his delusions, as if they were more apparent than real; he emphasises strongly the point that it is only in the last month that he has become rich, before that time he had only what he made at the bar. He has a good appetite, sleeps well, exhibits no restlessness, and talks sensibly on general subjects. He suffers from incontinence of fæces, and says he has lost control over his bowels. This last is not an uncommon symptom in syphilitic insanity.

Treatment.—Potass. iodid. grs. xv, Spt. Ammonia ℥xv, Inf. Gent. Co. ad ℥ss. Sig. Ex. aq ter in die. Malt extract ʒij after meals. His weight being registered every three days.

21st.—Remains quiet; sleeps well at night.

22nd.—He was given paper and writing materials to-day. His writing showed his grandiose ideas, but there was no defective formation and no repetition of letters, and everything was correctly written. He still continues to work at the manuscript of his book.

24th.—His mental condition continues as indicated above. He has gained two pounds in weight, and regained power over his rectum.

28th.—During the morning visit patient inquired about the amount of money of which he said he was possessed, and when told, exclaimed "I must have been off my head when I came here, because I have only what I make at the bar." This looked hopeful, and showed his delusional tendency was

passing off, but he still maintained that he had written books, and that last week among the papers he sent off to the press for publication was the manuscript of a book. Beyond this tendency of his delusional condition to pass off his mental symptoms are unchanged. He has gained three pounds since the 24th, making in all fifty-one pounds since admission.

October 1st, 1897.—On examination of his physical signs marked improvement is shown. He co-ordinates much better, and with greater ease when walking, the locomotor ataxic gait being less marked ; he can now turn quickly without losing his balance. His mental symptoms show he is still delusional ; this morning he sent off a bundle of papers through the attendant to the publisher, these being, he said, the last of the manuscript of a book he had written. The dose of iodide has been increased to 20 grains.

8th.—During the last week his mental enfeeblement shows signs of passing off ; he has more initiative, and attends to his dress and personal appearance in a more marked manner (on admission he was careless and untidy in his personal habits). The physical signs are in the condition indicated by the note of October 1st, 1897, with this exception, that his pupils now react to accommodation, though not to light. Tonics substituted for Pot. Iodid. Weight 135 lbs.

18th.—There is still further improvement in his mental condition, his delusion about being an author is not so strong ; he never refers to it and has ceased writing.

20th.—Treatment by Pot. Iodid. begun again.

November 4th, 1897.—Mental improvement is still more marked. All medicinal treatment (for the time being) has been stopped. He puts on weight to the extent of 1 lb. per week.

12th.—Patient has now recovered from the more acute mental symptoms. His delusions have disappeared, he recognises that they were delusions ; the memory of his illness being very perfect, he is able to tell all that he thought and did. He writes sensible and coherent letters to his friends, and talks and acts in a rational manner. There is no further improvement in his locomotor ataxia. Weight 141 lbs.

December 2nd.—Improvement still continues, there is only a faint trace of enfeeblement. He has become a sane individual, takes the initiative in conversation, and expresses opinions of

his own. He is calm and composed, mixes with the other convalescent patients, plays billiards, and altogether he has recovered his place as a sane social unit. Tonic treatment is being pursued, and his bodily health is improving. Weight 143 lbs.

12th.—To-day he was examined with the following result. His mental system is in good tone, its processes are clear and healthy, he is decisive in his ideas and judgments; all delusional tendency has disappeared, his memory is not defective, and he is capable of doing mental work. His locomotor ataxy is stationary, but his co-ordination has improved, and although ataxic in his gait his movements are interfered with little; his pupils are unequal, and still fail to react to light, reacting to accommodation.

18th.—Discharged recovered, with the following medicinal directions, that as a gouty person takes prophylactic treatment, so should he take Pot. Iodid. The ordinary precautions as to *régime* and overwork were given.

Readmitted in June, 1898, suffering from a similar attack. In this recurrence he is gradually passing into progressive degeneration; the mental and motor phenomena, in spite of antisyphilitic treatment, are slowly progressing.

Discussion

At the Annual Meeting at Edinburgh, 1898.

Dr. Clouston said that syphilitic insanity had advanced to a more important stage than when he first knew about it. Dr. Hughlings Jackson had laid it down that the syphilitic poison never affected the nervous substance directly, but only through the blood-vessels and the neuroglia. They had passed beyond the dictum of so great an authority as Dr. Jackson, and it was a very important point. There was no doubt, from what Dr. Welsh and others had shown, that the toxine of syphilis actually and directly attacked the nerve-cell and fibre, and did not affect those organs merely through the secondary effect on the vessels and neuroglia. The question whether there was not a syphilitic insanity that was directly dynamical, but where they had no motor symptoms, admitted of discussion. It had been said, and he thought that his experience confirmed it, that there was such a kind of case, commonly of a young man who had syphilis, and who in a year or two began in the first place to fall off in health, he became anæmic, bad-coloured, and mentally depressed, moody, and in a short time full of suspicions,—the kind of a case which was described in the Crichton Institution by Dr. Stewart. As a general rule there was an hereditary tendency to insanity. He would urge on them to use anti-syphilitic treatment and fresh air and exercise. Some cases in his experience had become vascular syphilis with localised paralysis. A few had resulted in real degeneration of tissues of the brain. He did not know if all the cases that were curable were dynamical. You could say that because they were curable they were dynamical. He believed there were actual demonstrable changes in the nerve cells and fibres that were curable under treatment or by natural means. He asked if they could state any pathological features which served as tests between the general paralysis and syphilis. For himself, he doubted whether this could be done. There

was always an element of uncertainty in the cases of syphilis and general paralysis. They should be vigorously treated as syphilitic. They should have the benefit of the doubt.

Dr. IRELAND said that he came to the conclusion that syphilis, as a general rule, spared the nervous system. Were there cases in which it was proved that the nerve-cells were affected and the vessels were not affected or not degenerated? He questioned if there were such cases. Dr. Tuczek complained that many in studying general paralysis forgot to study the fibres. Dr. Welsh had said very little about the fibres. He believed a great many cases were merely insane people who had contracted syphilis.

Dr. FORD ROBERTSON said it would be difficult to prove that they could have a case in which there was affection of the nerve-cells without affection of the vessels, because the disease in these cases often affected the very minute blood-vessels, and he did not see how they could exclude the presence of the vascular disease. Regarding the question of the distinction between syphilitic insanity and general paralysis, he really did not know any distinction between them.

The PRESIDENT referred to two cases reported by him in the JOURNAL for January, 1887; both still remain well. Although he did not hold that all cases of general paralysis were syphilitic, yet they ought to bear in mind that a case might be syphilitic and might be curable. His ordinary treatment continued to be the green iodide of mercury with small doses of opium.

Dr. WELSH, in reply to the President, said that he thought dynamical was a better term than functional, because it treated of the structure of the cell. Functional did not give any indication of structure.

The Necessity for a Museum and Laboratory of Cerebral Pathology and Physiology. By A. H. NEWTH, M.D.

IT is probably not an exaggeration to say that no physicians have so many favourable opportunities for pathological observations as those connected with asylums. Post-mortem examinations are generally expected to be made on all patients who die in asylums. There are in most, if not in all the asylums, well-appointed mortuaries for conducting these examinations, and every facility is available for preparing and preserving morbid specimens and making microscopical and other observations. In some asylums special pathologists have been appointed.

In spite of these advantages the study of psychological pathology has not advanced so much as might be expected, for though there are many earnest workers in pathology and microscopy among the superintendents and medical officers, their labours are to a very great extent depreciated in value from too much individualism, a lack of uniformity in working out the details, and a want of opportunity for comparison of

their work with that of others and by others. The thirty years that I have had the privilege of compiling the index for the *Journal of Mental Science* have afforded me abundant opportunities for noticing the very numerous accounts of the valuable specimens of brain histology and pathology both macroscopical and microscopical that have been recorded, and it is to be regretted that they have not been so preserved as to be made available for comparison and observation. During my residence in the Sussex County Asylum I prepared a large number of pathological specimens and mounted several thousand microscopical slides; but practically they were all thrown away, and this, no doubt, is the experience of many. A very large amount of valuable pathological material is lost for want of the possibilities of preserving it. Asylums generally are not the proper places for the preservation of pathological preparations. Even if they were, scattered as they are over so large an area, it would be extremely difficult for students and others to obtain access to them.

What is required, and it is an absolute necessity, is the formation of a suitable museum in some accessible situation where pathological specimens of brain and microscopical preparations of healthy and diseased cerebral tissue should be preserved and made available for observation and comparison.

This museum would be extremely interesting and instructive, and, I venture to think, unique. If arranged in a scientific manner it would prove of great value not only to alienist physicians, but also to psychologists who are engaged in the study of the physical basis of mental action.

There might, for instance, be preparations showing the gradual development of brain from the embryo to the adult; of degenerative brains, as in idiots and imbeciles; criminal brains; brains showing disease or injury of special parts, to illustrate local cerebral functions; the different forms and situation of tumours of the brain; atrophied brain, &c. The JOURNAL frequently gives illustrations of these, but it would be far more important to students to be able to see the specimens themselves, Where the actual brains could not be obtained casts might be taken and sent to the museum. Photographic illustrations of diseased brain and of peculiar phases of lunacy would also find a place and be of general interest.

Workers with the microscope would send their preparations which might be arranged systematically so as to be easily referred to and compared with those of others. These microscopists would have an impetus to work more energetically when they felt that their labours were not in vain, but that they would be honoured by being placed where those able to appreciate and profit by them might have opportunities for observing the results of their work and deducing facts from them of scientific value.

If the various labours of these microscopists could be so organised that each might prepare some special part of the brain, in time a most complete series of microscopical specimens might be obtained to demonstrate the histology of the brain. This collection, carefully arranged, would be of untold value to the science of psychology.

Much has already been done, and is being done, by many earnest workers in the microscopical pathology of the brain. but the task of forming a complete or even an approximately complete series of preparations to demonstrate cerebral pathology is so enormous that no single person, however hard he laboured at the subject, could accomplish more than the most insignificant quota to the whole. It is only by concentrated, connected, uniform, combined efforts that any satisfactory results can be achieved.

With united efforts under a competent supervisor or director, who would apportion the various spheres of labour, compare the results and record them, and also arrange and tabulate the various specimens, making them easy of access, so that others may be able to work out facts from them, the study of the physiology and pathology of the brain would in time be so advanced that very definite and satisfactory conclusions could be obtained from them.

The pathology of insanity being thus made more perfect, it would be possible to get a more correct nosology, a more satisfactory diagnosis and prognosis, and consequently a more decided method of treatment. In fact, tend to make the study of insanity an exact science.

This is no Utopian idea; it is and has been the result of painstaking pathological investigations in all other forms of disease. With the splendid organisation that the various asylums furnish, under the able assistance of the medical

officers, such a work might be accomplished in Great Britain which the world would be proud to recognise.

The organ of the Association is termed the *Journal of Mental Science;* in order to render it more worthy of this title the Association must consider seriously and determinately the necessity of founding such a museum.

In connection with the museum there would have to be a laboratory; this ought, as a natural consequence, to be under the control and direction of a committee of the Association. The London County Council has already fitted up one at Claybury Asylum, with Dr. Mott as pathologist. The Lancashire asylums have appointed several pathologists at an expense of £900 a year. The West Riding of Yorkshire has for many years been distinguished for its special pathological work under Dr. Bevan Lewis, whose researches in neuro-pathology are a matter of history. The State of New York has provided a laboratory for the correlation of scientific investigation in psychiatric and neurological research, which is ably described by Dr. Gieson in the October number of the JOURNAL. Most of the Scottish asylums have joined to form a laboratory under the able superintendence of Dr. W. Ford Robertson. The Commissioners have repeatedly insisted on the importance of pathological investigations in insanity. Surely it is time for the Association to bestir itself and establish a laboratory in London. The great difficulty, of course, is the expense of such an undertaking, but this can easily be met. It only needs a recommendation from the superintendents to the committees of the various asylums pointing out the urgent need of such an undertaking in the interest and importance of pathological investigations to obtain a contribution from each towards this work. I think also it would not be unreasonable to expect, if the matter were properly laid before the Government, and it were clearly shown how important for the welfare of society generally the scientific investigation of the nature of insanity would be, that the State would readily grant a yearly sum for this purpose, and the Commissioners may be induced to support this application. The College of Physicians or Surgeons in London will also, no doubt, act as liberally towards the scheme at least as the College of Physicians in Edinburgh has done. For the study of insanity has not to be confined to the medical officers of asylums, but it is of importance to every medical man who has constantly

to meet it and treat it in its early and possibly remediable form. A more correct knowledge of the pathology of insanity will eventually tend to check the increase of the disease which every year is becoming more appalling.

There is a valuable library connected with the Association; this ought to be available for loan not only to the members but to the profession generally, and should be under the care of a librarian who might also be curator of the museum and pathologist to the laboratory. It would also possibly be an advantage if he were sub-editor of the JOURNAL as well, acting under the direction of the several present very efficient editors. His assistance to them would no doubt be valuable, as having constant access to the library he would be able to refer to what has been written on the different subjects treated of, and make comparisons as to the various opinions that are or have been held on them. In fact, he would be in a position to write a sort of leading article in each number of the JOURNAL.

There are many capable men who would willingly act as curator and librarian for a mere honorarium. It is a question whether it would be desirable that he should be one devoted to original research, as this would interfere with the important duty that he ought to perform of collaborating, classifying, and directing the work of others.

If the West Riding alone has done so much; if the Lancashire asylums, and some of the Scottish asylums are able to combine to form the splendid laboratory that is doing such excellent work already; if the London County Council has established a laboratory; if the New York asylums are to the fore in this respect, surely it is time that the Association should prove by decided effort that it is not behindhand in the endeavour to make the science of the pathology of the brain as advanced as that of most other diseases. The value of the laboratories for cerebral research is already beginning to be proved, the investigations of Dr. Mott have received recognition by Drs. Bevan Lewis and Oppenheim, and Dr. Ford Robertson is engaged in a work on cerebral pathology. If the result of the few laboratories that are already formed is so satisfactory, what may not be expected from a more thorough and extensive combination of all or nearly all of the asylum workers in Great Britain?

Considerations on the Mental State in Aphasia. By Conolly Norman.

The subject of aphasia is one which has offered some of the most interesting problems presented to the physician for solution, and, although many remain unsolved, yet the study of aphasia has been more fertile of great discoveries as to the function than that, perhaps, of any other brain symptom or group of symptoms. The researches of Broca, indeed, were the beginning of localisation, and, as far as the cerebral cortex is concerned, formed the starting-point of any scientific knowledge which has since been attained.

The whole field of aphasia is full of interest—of practical interest to the physician and the surgeon, of interest to the scientific thinker, and of interest to the historian of our art, who will some day have to record the triumphs won therein as among the noblest which the human intellect shall have achieved in the mighty struggle it ever wages with Nature to wrest from her one by one her most recondite secrets.

To us who work in the comparatively limited sphere of practical psychiatry, aphasia has, besides its general or scientific interest, a further importance as bearing upon the question of how far a lesion, theoretically and according to our present lights, limited in extent, can affect that total of the higher nervous functions which we assume under the name of mind. How far, again, is the cerebral faculty of speech necessary for the maintenance of thought; how far essential to the education, the building up, of the mind?

The relation of words to thought is a subject which it is hard to discuss without departing from the biological and assuming the metaphysical, or at least the teleological position. That the process of thinking can be carried on without words Max Müller denies, but Preyer seems to show that the great philosopher of language is too absolute in this respect. Preyer points out that we cannot deny thought to the infant at a time before he has learned to utter a single word, and comes to the conclusion that primitive thinking is not bound up with verbal language. Of course, he in no way denies the importance of language to the further progress of the intellect; in fact he insists upon it. Marie,

in an able and thoughtful article on the "Evolution of Language considered in connection with the Study of Aphasia," traces the origin of spoken and written language. Other animals, he tells us, than man have the innate power of emitting certain sounds whereby they communicate with each other. This he calls natural language; it is not taught. Besides this, man possesses the power of creating a conventional or artificial language. It is conjectured that the first step of this human language may have been onomatopoetic, but even the most primitive tribes are now so far removed from the earliest stage of language that this cannot be proved. Gradually enlarging, elevating itself, generalising, language has become the powerful machine which we know, "an instrument fabricated by the brain of man in order to fabricate the brain of man." He then follows the history of writing from its primitive condition, when it was a more or less rude drawing, to its present entirely conventional phonetic stage. Proceeding to consider the relations of aphasia to the growth of spoken language, he says that we are not allowed to suppose in the present state of our knowledge that any conventional acts or act acquired by instruction can have a special centre in the cerebral cortex, but that it needs must borrow the centre for the function concomitant to its execution. Now, as the function of spoken language has a special centre, it follows that this fact can only be explained through the gradual formation of this centre in a long succession of ancestors who have made use of spoken language. But, says Marie, written language is still more conventional than speech, still more an art that is taught to the individual. It is, moreover, even for the most highly educated, an art of yesterday in the history of the race. How, then, can written language have, as is almost universally held, special centres? On the contrary, this vast difference exists between spoken and written language, that the former proceeds in the individual from centres preformed for its production, the latter from centres merely adapted. He strives to confirm this conclusion by a consideration of the mistakes one commonly makes in writing—mistakes of letters similar in sound not in shape. He further points out an explanation of the phenomenon called by various authors subcortical alexia or pure verbal blindness. In this condition, it will be remembered, the power of writing is retained, though the patient cannot read words. Marie maintains, with Redlich and Higier, that this state of

affairs is not due to a special lesion, but to the fact that the sufferer is a person to whom writing has become so familiar that he does not require the aid of vision, whereas when a person unaccustomed to writing is stricken with verbal blindness agraphia follows, as the individual is unable to execute the necessary movements of writing without the aid of the eye. From this, again, he infers the absence of any special centre for writing. He concludes by protesting against the profusion of localisations now in fashion in connection with aphasia, most of which are merely schematic or are founded on defectively interpreted facts.

Brissaud, analysing and refuting Marie's views, in an article on the centre for agraphia and on deaf-mutism, points out that the examination of deaf mutes shows that the distinction between preformed and adapted centres cannot be maintained. It is hardly to the purpose to say, as Brissaud does, that every act in the life of relation has to be learned, because learning to walk or run or jump is absolutely a different thing from learning to speak or write. Marie's contention that all our writing is phonetic in its origin is admitted ; that is, the letters of the alphabet are designed, of course, to represent sounds ; but regarded in itself each written letter is the inscription of a gesture—a muscular movement. Now, we make this record of a manual and digital muscular movement with a pen on a plane recording surface, and this constitutes writing. The deaf-mute, when he (as is commonly but very incorrectly said) speaks on his fingers, uses digital and manual muscular movements to convey his ideas, and in point of fact writes in the air. Writing on the plane and writing in space are identical (graphic and cinematic writing, as Brissaud calls them). But dactylology (= the dumb alphabet, writing in space, cinematic writing), though it may have a relation to uttered sounds in the mind of a teacher who hears, has no such relation in the mind of a deaf-mute learner who is absolutely incapable of comprehending such a relation. Here, then, we have the primary adoption of conventional signs in no way connected with speech. Why should we not suppose a preformed centre for their production ? Or rather, why should we not apply to the speech centre the terms in which Marie speaks of the supposed graphic centre :—" Certain common centres presiding already over other processes of natural and spontaneous cerebral

function"—("vision, movements of the limbs, &c.," *Marie;* "hearing, movement of the lips and tongue," *Brissaud*)—"are, in consequence of education, adapted to carry out, in addition, all which pertains to their functions in the operations of"—("written language," *Marie;* "spoken language," *Brissaud*). If the faculty of language is preformed, language should be identical for the whole race, as every man walks and runs in virtually the same way.

These views are confirmed by another consideration, which Brissaud does not mention—the untaught spontaneous codes which deaf mutes, who are otherwise intelligent, use for the communication of their emotions and thoughts. These are, of course, unrelated to sound. They are largely pictorial; representations, or abbreviated representations, of actual objects, but they are also conventional or arbitrary, and intelligent but untaught deaf mutes discover and make use of signs by which they express simple relations in time and space, and thus remove their code from the merely representative stage.

Nevertheless, whether through the influence of racial habit, or because the muscles of the speech organs are more flexible, there seems to be a special facility for their use in efforts of expression. This appears from the curious fact that deaf mutes who have been taught lip language use that mode of communicating with each other in preference to dactylology, though the latter has generally been learned earlier, and is probably less liable to erroneous interpretation.

The human faculty, which seems pre-eminently to distinguish man from the brutes, is the faculty of expression, the faculty of communication with others. Language subserves this faculty, and is its most important agent in the normal state; yet, as we have seen from the consideration of deaf-mutism, language is not essential to expression, though muscular movement is. Now, the faculty of expression is probably itself something superadded to the power of re-representation or registration in consciousness. The latter is probably always effected through the aid of a sign, this sign being some muscular movement. Possibly an imitative gesture of the limbs, of the facial muscles, or of the vocal organs, gives the clue to the earliest attempts. This muscular movement, or the memory of this muscular movement, is probably more easily recalled than the original sense object, hence the sign comes to be used in consciousness

for the object. Thought becomes thus possible without immediate dependence upon sense impressions or their residua. Abstract ideas, general ideas, ideas of time and space, ideas of number, only become possible when signs have been adopted. In fact all ideas of relation are dependent upon symbols; and since thinking, as distinguished from mere memory of sense impressions, might be described as the perception of the relation between the objects of sense, the importance of symbols to our mental life becomes evident.

The value of this aspect of the matter appears when we consider that, if it be a true one, it would follow that with entire obliteration of the expressive faculty would be associated an entire destruction of the power of thinking. The condition of a man in whom this faculty is non-existent would be that of the beast that wants discourse of reason or that of the infant who may indeed display emotions, as a mere reflex, but is incapable of expressing them either by words or other signs.

There are certain conditions connected with aphasia which seem to support this view. A form of disturbed cerebral function has been described by Finkelnburg under the name of asymbolia. Heilbronner, who has recently described three cases, defines the affection as one which is denoted by the non-recognition of objects, in spite of the maintenance of the sensory functions, and while the patient's general condition of consciousness is such as permits the investigation of these symptoms. A patient of this kind, for instance, cannot deal with ordinary articles in daily use. Show him a cigar, a knife, and a match box, and he is unable to cut the cigar and light it. The author gives an account of the post-mortem appearances in two cases,—circumscribed foci of softening in the temporo-occipital lobes,—and dwells upon the fact that a limited disease of the brain, which may not involve any considerable portion of either hemisphere, is yet capable of producing a condition which reduces the mental functions to the level of the profoundest imbecility.

Starr has studied the same or a similar state under the name of apraxia, while Freud suggests the title agnosia. The best studies of the condition, however, are probably those of Pick. One of the patients described in his recent book suffered from slight cortical motor aphasia without word deafness, a

slight degree of psychical deafness, marked psychical blindness, and marked loss of the psychical faculty of taste and smell (power of distinguishing objects by these senses). There was also slight right hemiplegia (without facial involvement), irregular reduction of both fields of vision, occasional disturbance of localisation of auditory impressions, and a moderate degree of enfeeblement of intellect. In this interesting case, circumscribed foci of softening of the cortex were found on the right side in the posterior half of the fusiform and lingual convolutions, on the left side in almost the entire cuneus and the posterior third of the lingual lobule.

In many other of these cases an element of general mental enfeeblement seems to present itself, inasmuch as the patients do not try to correct one sense by another, though the latter may be intact or relatively little affected. Herein the whole power of calling up the symbolic representations of objects seems defective. Thus, Rabus draws attention to the circumstance that a patient of his who suffered from psychical blindness, seldom or never attempted to obtain recognition of an object by touch as ordinary blind people so constantly do.

Certain cases of aphasia or phenomena akin to aphasia are, in the present state of our knowledge, extremely difficult to explain on any theory of localisation. Such is Grashey's case, which presented this feature that the patient could recognise objects, but could not name them, while on hearing the name he could at once point out the object. Grashey tells us that he at first was inclined to explain this schematically by supposing that the connecting path from the sound image to the object image was intact, while the path from the object image to the sound image was interrupted. Rejecting this too facile explanation, he proceeded to a more minute study of his case, and found that the patient showed a marked inability to retain for any time either object images, sound images, or symbols of any kind. If any object was shown him which he recognised, and he was asked a few minutes afterwards to touch the object which he had been shown, it was found that he had meanwhile forgotten what the object was. For the same reason he could not group together images of any class. If he was shown successively and singly the letters of a word, he could not tell at the end what the word was, for he had already forgotten the first letters, though he could read the word when it was presented to

him in its entirety. Grashey, then, considered that the general enfeeblement of the perception (memory) accounted for the impairment in speech without supposing a localised lesion. The discussion of this case, first described many years ago, continues to excite interest. Störring, about two years since, proposed to explain the condition on the theory that, in the normal state, the reproduction of the sound image of the name belonging to anything is much more seldom associated with the perception of the object than is the representation (imagination) of the object with the hearing of its name. Hence the transition from the sound image to the object image, is easier than that from the object image to the sound. So with a general depression of the function of both centres the phenomenon observed would occur. Wolff, in a paper on disturbances of association, reports further observation on this case. He notes a general weakness of association, which the patient was able to overcome by the direct contemplation of an object with regard to which he wanted to speak. He further helped himself by writing down the name of the object. Thus, if he was asked the colour of leaves he looked out of the window in order to behold a tree, and then was able to write down the word "green." Looking at sugar he could indicate its visible properties, but did not know its taste until he put it in his mouth. He could not recognise a key by touch unless he, at the same time, saw another key. The conclusion come to by Wolff was that the patient found it impossible to call up associations in a purely abstract way, and could only find a word when he was supported by sensory perception.

In an interesting case which came under the notice of the writer of the present article, aphasia used to occur and last for a couple of days after apoplectiform seizures in general paralysis. While in this state the patient strove to speak spontaneously, and either could not or indulged in mere paraphasic gabble. If he was asked to repeat a word he generally failed, unless he was at the same time shown the object, when he usually repeated the name correctly. This was most remarkable with numerals. Asked to repeat "one, two, three, &c.," he was unable to do so. But, if the corresponding number of fingers, pencils, or the like were held up, as each numeral was named he repeated the name correctly; and this with some understanding, for if one uttered the word

"three" and held up four fingers, the patient shook his head and remained silent.

In the case last referred to the conditions were temporary and of short duration, and so commonly are the states of aphasia preceding or following epileptic fits. But in perfectly permanent conditions of the aphasic order a remarkable variation in the intensity of symptoms is frequently to be observed, a fact to which Lissauer calls particular attention in his account of a case of psychical blindness. This suggests a general, or what might be called a functional, derangement, superimposed upon an organic local one or coincident therewith.

Bonhöffer has described a case of alcoholism which presented well-marked asymbolia, from which condition the patient recovered, with, however, a certain amount of psychical defect.

Cases of aphasia have been not uncommonly recorded in general paralysis. Probably more of these would have been noted but for the extreme difficulty of studying these conditions, at least in the advanced stages of that disease. Psychical blindness with dementia paralytica has been the subject of studies by Reinhard, Zacher, Stenger, and others. Paralexia in general paralysis has been carefully described by Rabbas and Salgò, and is, no doubt, a genuine symptom of paralytic dementia. In a few cases aphasia in general paralysis has been found to be due to distinct focal lesions. More often it appears to be connected with more widely-spread conditions.

Similarly, in senile dementia there is a particular liability, owing to the state of the vessels, to focal hæmorrhages ; but without the existence of the latter various conditions of aphasic trouble occur. Schüle points out the resemblance of some of these to the commonest form of aphasia from focal hæmorrhage. He does not dwell on a mode of paraphasia which is very common in senile dements, but he mentions the occurrence of agraphia, alexia, and paralexia. It appears to the present writer that the very common loss of orientation among the senile, by which they lose recognition of the objects around them, and develop thereby ideas that they are not at home, that they are in strange places, and so forth, may be due really to a condition analogous to, or connected with, pyschical blindness.

On the whole it must be evident that aphasia, using the word in its generic sense, is intimately associated with forms

of mental disturbance with which we have daily to deal. As we might suppose, looking at the matter from a schematic point of view, and considering the vast importance of those elements of the mental life which are involved, we find in many cases of aphasia very serious engagement of the intellect. A great practical question arises which may at any moment call for the consideration of any man who practises in our speciality, namely the social and legal status of the sufferer from aphasia. *À priori*, and speaking strictly, one inclines to say that there cannot occur any direct injury to a portion of the brain, no matter how small, without producing some lowering of the mental powers. One would expect this degradation to be the greater if the portion of the brain involved were one subserving function, the relations of which to thought are, without question, of the very closest kind. One would, however, also expect that focal lesions involving the seats of function of expression, and being strictly limited, are less destructive to the whole mind than such conditions of the cortex as involve a general disturbance of association. When cases come before us of aphasia, or any allied condition, for a determination of the mental state, our first endeavour should be to find out within what limits the injury to the higher nervous functions is confined, and whether the general intellectual faculties remain comparatively high. In doing so we also are enabled to form an opinion of what the probable seat of the injury to the brain may be, and we learn the condition of the organs of expression. Our interest in the organs of expression in this particular inquiry is especially claimed, because the point at issue is rarely so much the treatment of the mental defect as the capacity of the patient to transact business or to dispose of his property. This capacity may be interfered with by the abolition of the power of expression, even if the supposition were tenable (which we hold is not tenable) that total destruction of expression could occur with maintenance of thinking power.

Each case must be judged separately. There is not, and there probably never will be, a criterion rigidly applicable to all. Two preliminary points are worth mentioning. First, one should not base an opinion on an examination held very soon after the first appearance of the symptoms, else we may be misled by merely temporary phenomena, due, perhaps, to what, for want of a better name, we may call shock. Secondly, in

any case, except the very plainest, repeated examination is necessary. Not only do many aphasics vary from time to time, but the aphasic is usually very liable to fatigue, and it is only by examination, repeated and not too protracted, that one can be satisfied as to his real condition.

In the majority of all the cases of aphasia which come before us, certain complications, or rather concomitants, greatly increase our difficulty. Thus we have in most cases some degree of right hemiplegia which may prevent our patient being able to communicate with us by writing.

The form of aphasia which interferes least with power of expression, and in which mental integrity is best preserved, that is in which a lesion exists absolutely limited to the motor speech-centre, or, as we should prefer to call it with Bastian, the glosso-kinæsthetic centre (Broca's convolution). At least one such case is recorded by Guido Banti (quoted at some length in Dr. Bastian's book) in which the patient was completely dumb; his mind seemed absolutely clear; he heard and understood; he read; he wrote promptly and correctly. It generally happens that the patient is not completely dumb, but has the power of uttering a few sounds or words which are used indiscriminately, or recur without any particular meaning. In such cases the audito-kinæsthetic commissure is probably interfered with. Though the patient may understand what is said to him, he often uses such words as "yes" or "no" without any apparent appreciation of their meaning. No cases present greater difficulty if one wishes to ascertain the patient's desire (in such a question as the making of a will, the transaction of a business affair, or the like). It is impossible to be certain what is the wish of a man who says "yes" to everything or "yes" and "no" alternately to any question. It may be there are such patients who are able to write and communicate by signs. In the majority of cases, at least, "motor" aphasia is accompanied by more or less agraphia, so that we are brought face to face with a double bar to expression, in the inability to either speak or write.

Nevertheless, if there is not alexia, communication may be possible. Bastian quotes from Broadbent a remarkable case in which there was almost complete motor aphasia, the patient's vocabulary being confined to some half-dozen words, and her writing power *nil*. She conveyed her meaning by pointing

out things and by various signs. She expressed assent vigorously when those about her had guessed her meaning correctly. She worried over some money which she thought she had lost, and she kept on endeavouring to explain for nearly a year before her friends discovered exactly what she wanted. At the same time she was having her will made. This was gone over bit by bit with wonderful patience and care. She insisted in the end on having everything as she wished it. One would not say that this lady was incapable of making the will to which she gave so much time and thought, and which she could not sign, and yet she showed a mental defect or limitation in one curious way. Broadbent tells us that the fact "that she knew what word she wanted was shown by her resorting to letters and sometimes to a dictionary." If she had resorted intelligently to a dictionary she could have told the story of the money she thought she had lost in a few minutes, instead of waiting and making signs for nearly a year till it was pieced out and guessed by her friends.

Opinion is divided as to how far verbal amnesia is associated with disease of Broca's centre alone. We should expect such a combination, and, as a matter of fact, verbal amnesia is generally found associated with "motor" aphasia. Inability to recall words, with its ordinary accompaniment of paraphasia and with corresponding degrees of agraphia and paragraphia, do not in themselves present insuperable difficulties in communication, because a patient may suffer in this way and yet understand speech and repeat words or even read aloud. Therefore, with care and patience, his general mental state can be ascertained, and if we find that he has fair power of fixing his attention and a sufficiently good memory to assent and dissent respectively to various propositions made to him at intervals, we may allow that he has some capacity for transacting business. If motor aphasia coexists, as is so frequently the case, it may be entirely impossible to say how far the patient is competent.

In word-deafness the patient is usually unable to understand or to repeat words, and can neither write spontaneously nor from dictation. He is, as a rule, either dumb or paraphasic. But varieties of word-deafness are on record in which (Byrom Bramwell) a patient was able to repeat words and sentences which she did not understand, and also write sentences from

dictation ; and (Pick) in which a patient could not understand speech, nor repeat words, nor write from dictation, but spoke perfectly well and wrote spontaneously. In the latter very remarkable case, apparently the most unmixed form of word-deafness recorded, it is especially noted by Pick that "the intelligence of the patient had distinctly suffered ; his behaviour was childish ; it was difficult to fix his attention for any length of time ; besides, he was very lachrymose and emotional. Most of his time he spent in prayer, and when he was thus engaged no kind of noise around him could disturb him," though at other times it was clear that he heard loud noises—as noises—and he used to protest against being shouted at. We note that it is just in cases where only a comparatively limited interference occurs that small defects of intellect are observable ; thus if this man had had paraphasia it is not unlikely that the weakness of his intellect would have escaped attention.

Word-blindness is generally accompanied by agraphia. It is very often found that a patient is capable of signing his name correctly, although he cannot write anything else. The real value of such a signature depends upon whether the patient is fully cognisant of the use to which it is being put and approves thereof ; in other words, it has no further significance than the cross or mark appended to a document by a person wholly illiterate. "The signature," says Bastian, "is an emblem which may, by reason of its familiarity, be executed by the cheiro-kinæsthetic centre with the smallest amount of prompting ; and it would appear that this prompting may come from the common visual centre in cases where the left visual word-centre is destroyed. Similarly a word-blind patient may be able to recognise his own name when he sees it, though apart from this there may be complete alexia." It has been found that cases occur of word-blindness in which the power of writing is preserved, and even of reading aloud words written by the patient to dictation, as in a case recorded by Déjerine, in which, nevertheless, the patient did not understand the words which she saw or which she wrote.

When psychical deafness is associated with word-deafness, or when object-blindness is associated with word-blindness, the conditions of mental degradation are more advanced than when the latter conditions occur alone, and in complete asymbolia the state is one of entire dementia.

Clinical Notes and Cases.

Cases of Suicidal Impulse in Conditions of Cerebral Automatism. By W. C. SULLIVAN, M.D., Deputy Medical Officer, H.M. Convict Prison, Parkhurst.

FROM a medico-legal, as well as from a purely psychological point of view, much interest attaches to the study of those states of cerebral automatism met with in connection with certain morbid conditions of the nervous system.

In this note I have recorded three cases (1) of suicidal impulse developed in this automatic state—in one instance related to epilepsy, in another to epilepsy and alcoholism, in a third to alcoholism alone.

These cases do not present any very novel features, but I have thought them worth publication because they illustrate very clearly—and this is the common character which links them together—the mode in which antecedent cerebral processes influence the nature and direction of actions performed in the automatic condition.

The characteristic feature of such actions is, of course, that they are performed unconsciously, or, what is perhaps more likely, that they are accompanied by a state of consciousness in some way so different from the normal waking consciousness that it either entirely fails to connect with that consciousness, or only does so in an imperfect fashion ; that hence no recollection, or only a vague, dream-like recollection, of the action remains after the cessation of the automatic state.

The subjective evidence of memory being excluded by the break in consciousness, it is only by clinical observation that we can attempt to discover the circumstances under which the actions originate, the conditions in the organism which determine the nature of the impulse and its mode of manifestation.

These conditions, whose influence can be traced in the acts of cerebral automatism, as in dreams and in the delusions of insanity, have been thus classified by Maudsley : "(*a*) impressions made on sense from without the body ; (*b*) internal impressions

from the viscera and other organs of the body; (*c*) stimuli arising from the state of the blood, both as regards supply and composition; (*d*) the exhausted effects of recent experiences, whereby lately vibrating parts are prone to be stirred easily into renewed vibration; and (*e*) the proclivities of the mental organisation, as determined by hereditary causes and the special experiences of life" (2).

In the large majority of instances it is of course impossible to detect more than a very few amongst the numerous influences which combine to determine a given impulse.

In a paper published in this journal (3), I have endeavoured to show, with regard to one large and important group of such impulses, viz. the suicidal impulses developing in the automatism related to alcoholic intoxication, that the impulse in the great majority of cases has its origin in emotional changes in the personality, dependent on the general disorders of visceral function induced by chronic alcoholism, and that the frequency of such disorders is the reason of the predominance of the suicidal tendency among the impulses of the alcoholic.

In the cases recorded in the present note, my aim has been to exhibit from the same clinical standpoint the indications which in certain instances the peculiar features of the case may furnish for tracing the origin of the impulsive act, either as regards its tendency, or as regards the particular mode of expression of that tendency.

I should finally point out that by limiting our examination to cases of suicidal impulse we avoid, as far as possible, one chief source of error, viz. deception on the part of the patient. It is obvious that the plea of automatism, so useful in cases of homicide, cannot in any way serve the interest of an individual accused of attempting suicide; it alienates the sympathy of the humanitarian by the lack of sentimental motive, while the possibility which it suggests of impulsive action of graver character in the future is calculated to brand the patient as a social danger. For these reasons we may, I think, assume that when suicidal patients allege absence of memory, their statement is, in all probability, true.

Obs. 1.—R. R—, male, æt. 20. Charged with attempting suicide by poison.

Parents living, sane and sober; nothing special in family history. Patient has had fairly good general health; intelli-

gent and well educated. At seventeen years of age began to suffer from epileptic fits with epigastric aura ; fits associated with nocturnal headache and localised tenderness of scalp. Attacks were sometimes of classic type, sometimes limited to symptoms of "petit mal." Underwent a craniectomy about eighteen months ago, portion of right parietal bone being removed ; no permanent effect on fits.

Fits have often been succeeded by phases of automatism, during which patient has assaulted his relatives and performed other undesirable actions, but has never manifested any suicidal impulse. A short time prior to committing the offence with which he is now charged, he lost, owing to his disease, a clerical appointment which he held. In consequence of this he was very much depressed, but had not entertained any idea of suicide.

On the morning of the attempt he had a fit soon after 9 a.m. ; states that he has no memory of what occurred subsequently until he found himself in custody, the amnesic period being about half an hour. It appeared from the evidence that he went to a druggist's shop, a few streets away from his home, and purchased some carbolic acid, the druggist observing nothing peculiar in his demeanour. Soon after a boy saw him in the street in the act of putting the bottle to his lips, and noticing the poison label, called the attention of a policeman, who arrested prisoner.

Remarks.—The principal feature of interest in this case is the indication it seems to offer as to the origin of the suicidal impulse. Previous fits had frequently been followed by phases of automatism, unassociated, however, with suicidal tendencies. A fit occurs at a moment when the patient is brooding over the loss of his employment—in itself a not uncommon motive of suicide—and in the post-epileptic phase he makes an elaborate attempt to kill himself. This succession of events suggests very strongly that the emotional shock occurring before the fit, stood in a causal relation to the suicidal attempt in the automatic condition, that the impulse was an evolution of the train of cerebral activity in progress at the moment of the fit, the suspension of the higher controlling centres allowing the development of the impulse and its passage into action.

In this case, then, we have a patient in a state of post-epileptic automatism carrying out, with every appearance of perfect

lucidity, a complicated series of actions adapted to a definite end, and that end one for which a reasonable motive can be found in the ideas existing prior to the fit. This observation has seemed to me to be worth recording as a further evidence of the fallaciousness of the opinion that the automatic acts of the epileptic always bear intrinsic proof of their morbid origin.

As in the analogous case of dream-consciousness there are relatively rational as well as utterly preposterous dreams, so in the states of automatism with which we are here concerned, though very frequently the acts committed are characteristically irrelevant and exaggerated, yet they may, on the contrary, appear perfectly reasonable, consistent in their nature with normal motives, in their execution with normal lucidity. If, in this instance, we suppose the obviously possible contingency that the patient had committed not a suicidal, but a homicidal act, equally apt in aim and execution, we shall see how well such a case illustrates the danger of assuming that an appearance of deliberation and the presence of reasonable motive are sufficient grounds for rejecting the plea of automatism put forward to establish irresponsibility in acts committed by the criminal epileptic or the criminal alcoholic.(4)

Obs. 2.—A. B—, female, æt. 41. Charged with attempting suicide by drowning.

Father living; suffers from attacks of "petit mal;" starts, changes colour, stares for a few seconds, then returns to normal consciousness; these attacks are replaced by convulsions when he drinks. Nothing else of special note in family history.

Patient states that she suffers from "fainting attacks," characterised by momentary absence of consciousness, followed by fatigue and dreaminess; these attacks are more frequent after drink. For past twenty-five years has been addicted to alcoholic excesses, only, however, of relative degree, as a small amount of alcohol affects her markedly. Suffers a good deal from cardio-ovarian pain, palpitation, and muscular cramps. About twelve months ago attempted suicide by opening a vein in her arm; was drunk at the time, but has a vague memory of the act, though unable to suggest a probable motive. A few weeks prior to present attempt, patient had been excited by the death of a girl friend who committed suicide by drowning herself in the canal; patient had been a witness at the inquest, the affair had painfully impressed her, and had led her to

drink more than usual. On the day of the attempt patient was very drunk, and had a quarrel with her husband, who turned her out of the house. She has no recollection of what transpired from that moment until she found herself in hospital, where she was informed that she had thrown herself into the canal at the spot where her friend's body had been discovered.

Remarks.—From our point of view the element of special interest in this case is the resemblance in details of the futile attempt of the patient and the actual suicide of her friend. The impression made by the latter event upon the patient's mind apparently exercised its influence during the automatic phase of the intoxication ; the suicidal impulse arising in that phase tended to execute itself in the direction determined by the cerebral processes corresponding to the mental images which were present before the break in consciousness.

This is, in some ways, a parallel process to the more familiar phenomenon of the revival of recent vivid sense impressions in the hallucinations and delusions of the alcoholic. In all these conditions the patient seems, as it were, to annex to his own personality these impressions which had no real reference to him ; he has heard, for instance, the recital of some particularly brutal crime—seen it represented, possibly, in the peculiar varieties of dramatic and pictorial art which appeal to the populace ; under the influence of this impression, if hallucinated, he translates his reminiscences into horrible visions of the action, of which he now becomes the destined victim ; if delusional, he incorporates the impression with the memory of his own acts, and gives himself up to the police as the author of the crime ; finally, if he be primarily impulsive, the reminiscences of the action directly produce the corresponding motor impulse, and he automatically repeats, with more or less accuracy, the crime whose image had potently affected him in his normal consciousness. It is not improbable that a considerable proportion of the murders committed by the alcoholic are instances of such unconscious imitation during phases of cerebral automatism.

Obs. 3.—E. W—, male, æt. 25.

Nothing special in heredity ; gives a history of drinking excesses—beer and spirits—for many years past. Severe head injury three years ago through being crushed by a cart-wheel. Usual signs of chronic alcoholism. Is now charged with

attempting to commit suicide by throwing himself under a cart. States that he was extremely drunk at the time, and has no memory whatever of the attempt. Cannot imagine why he should wish to commit suicide.

Remarks.—This case conforms to the usual type of the primary suicidal impulses related to alcoholism ; the impulse develops when the intoxication has lasted many years, and has produced generalised nervous disorders in the economy ; it occurs during a bout of drunkenness, and it leaves no trace in the patient's memory.

My reason for recording the observation here is the peculiar mode of suicide resorted to by the patient. In some hundreds of cases of suicidal impulse I have come across only one other instance in which the suicide endeavoured to compass his death by throwing himself under a cart-wheel ; the rarity of this form of attempt is doubtless due to the comparative remoteness of its significance as a means of destruction of life. That the patient in this case should have sustained a severe head injury through accidentally falling under a cart-wheel, and that he should subsequently select precisely this unusual mode of suicide seems hardly explicable as a mere coincidence. It would rather suggest that, as a consequence of the previous accident, this curious agent was associated with the most distinct cerebral impression of destructive capabilities, and that, when the suicidal impulse arose it tended to execute itself in the mode determined by that predominant impression ; in order to kill himself the patient imitated the accident which had befallen him some years before.

(1) These cases were observed in H.M. prison at Liverpool.—(2) *Pathology of Mind*, 1895.—(3) *Journal of Mental Science*, April, 1898.—(4) In the case Reg. *v.* Boakes, the Riverhead murder, tried since the above note was written, the conditions suggested in our hypothesis were realised. The accused had made love to the girl who was the victim of the murder, and his addresses had been rejected. On the morning of the crime she was passing his house with some female companions, when the prisoner ran out, pushed the others aside, and shot the girl dead, then turning the weapon upon himself. For the defence it was advanced that "fainting fits" and attacks of vertigo, from which prisoner suffered, were of epileptic nature, and that the crime was committed in a state of cerebral automatism. Despite the strong suggestion of motive and deliberation, this view was accepted by the jury, and the prisoner was found "guilty but insane." [*Cf. infra*, Medico-legal Cases.—Ed.]

Occasional Notes.

Recent Researches of Professor S. Apáthy and their Bearing upon the Neuron Doctrine.

THE recent researches of Apáthy upon the "Conducting Element of the Nervous System"([1]) are of particular interest to students of neurology, and it will probably be serviceable to many who have no opportunity of reading Apáthy's original contribution to reproduce here his principal results and views. These researches have been conducted principally upon invertebrates (Hirudo, Lumbricus—which are especially adapted for the work in question—and others), but a few vertebrates (Lophius, Rana, Triton) have also been examined. It is, however, the author's intention to publish the results of his work upon vertebrates in a second part of the present treatise, and for this reason he withholds his main observations upon this class. But he states that in those vertebrates which he has examined the structure of the ganglion cells is fundamentally the same, in respect to the arrangement of the conducting element, as in invertebrates. It is clear, however, from statements made in the present work, that the invertebrates are better suited for the demonstration of the conditions dealt with, and that the study of these in the higher animals is very difficult by reason, as might be supposed, of the more complicated structure of the nervous system, and enhanced difficulties of technique.

Briefly, the present work, which is thoroughly illustrated by numerous figures prepared by Abbé's drawing apparatus, is intended to demonstrate the supreme importance of what is designated as the "primitive fibril" or "neuro-fibril," the conducting element in the complicated structure of the nervous system. These fibrils run, on the one hand, centripetally into the ganglion cells; on the other, centrifugally into sensory and muscle cells. Whether we take the centripetal nerve, the nerve cell, or the centrifugal nerve; whether we consider the nervous system at its periphery or at its centre, at all points we have to take note of the ubiquitous conducting element, all-

pervading, significant ; obtruding itself as, it may be affirmed, the most striking element of the nervous system. Nerve cells there are, and ganglion cells (and insulating material for the fibrils as they course in the nerve stems), but these do not constitute the essential structure.

Apáthy regards the first-named as producing the conducting substance, or primitive fibril (or the elementary fibrils of which the latter is composed), whilst the ganglion cells furnish " that which is to be conducted."

Our ordinary conception of a ganglion cell of the central nervous system is broadly that of a protoplasmic mass, with processes (dendrons and axon) in which our histological methods do not allow of differentiation of structure, apart from the demonstration of slight fibrillation of processes, and of granules. Apáthy, however, is enabled by his methods, and in the forms of life with which he worked, to show that the body of the cell is occupied by a meshwork of fibrils, into which run the primitive fibrils, entering the cell by certain of its processes, and from which pass primitive fibrils, to leave the cell by certain other of its processes. We have cellulipetal and cellulifugal fibrils, and an intra-cellular meshwork formed by the meeting of fibrils. In the meshwork the grouping of fibrils undergoes rearrangement. The neuro-fibrils do not end or begin in the somatoplasm of the cell ; they merely pass through it. There is, moreover, no connection between the neuro-fibrils and the cell-nucleus.

The conception of an axon, or axis-cylinder process, which springs from the cell, and is subordinate to the latter, which is the governing body, must be very considerably modified if the views of Apáthy are correct. There would then be no autonomy in the sense of a neuron, but the cell would be a protoplasmic body interpolated in the system of primitive fibrils, or in the conducting nerve-tract, with exalted functions, it may well be, but shorn of a great deal of the individual importance which is embraced in the present conception. Our conception of the neuron will, in fact, no longer hold good if the observations of Apáthy must be recognised as correct ; because these demonstrate the connection of ganglion cells by means of primitive fibrils, and therefore we could no longer believe in the existence in the nervous system of units independent of one another, except by peripheral contact.

The nature and *rôle* of the chromophile granules of the cells and their relationship, if any, to the primitive fibrils is not gone into in the present work.

As regards the relationships of the fibrils at the periphery; the afferent fibrils form a plexus within the sensory cells, and the efferent fibrils are similarly disposed in the muscle-spindles. But in each case the majority of the fibrils pass out of the cells into tissues beyond. The fibrils are also found between the cells, with free terminations. And they also pass into the cells of glands and into the walls of blood capillaries.

In the laborious work which is the subject of our notice, Apáthy employed technical methods elaborated by himself, and into which he goes with much detail. These can only be indicated here. They consist in (1) staining the fresh object in methylene blue, after the manner described by the author in *Zeitschr. f. Wissensch. Mikroskopie*, Bd. ix, pp. 15—37; (2) staining material previously fixed (as in sublimate) with the author's hæmatein solutions I A; (3) staining the fresh object, or that already fixed in sublimate or sublimate-alcohol, in chloride of gold solution.

From the above review of the main features of Apáthy's work it is clear that his results open up questions of the first importance in the domains of cerebral histology and physiology. Working on independent lines, and with methods elaborated by himself, the author, whose reputation as a skilled investigator is well known, records results which would appear to be entirely opposed to our present views, thought to be well established, and according to which the nervous system is composed of independent units, or neurons, communicating with and influencing one another by contact. These views will, of course, continue to be held whilst the work of Apáthy is extended and examined, especially in its application to the domain of the nerve-histology of the higher vertebrates.

(1) "Das leitende Element des Nervensystems und seine Topographischen Beziehungen zu den Zellen," von Prof. Dr. Stefan Apáthy, Erste Mittheilung, *Mittheilungen aus der Zoologischen Station zu Neapel*, Bd. xii, H 4.

The Lunacy Bill.

We are informed that the Parliamentary Committee has already considered what action should be taken in regard to the Pensions question. The Lunacy Bill not having made its appearance at the time of writing, it has not been possible to examine other matters, but there is reason to suppose that the forthcoming Bill will not materially differ from the last edition of its predecessor, except probably in the direction of introducing clauses enabling cases of incipient insanity being dealt with in private houses for a specified time.

As said above, the Committee has not waited for the Bill before setting to work at the Pensions clauses, and it has decided to issue a memorandum on the subject, nearly identical with that which it circulated last year. An important addition has been made in the shape of a comparison between the duties, responsibilities, risks, pay, and certainty of pensions between the asylum service and the constabulary, by which comparison it is conclusively shown that the former is at a disadvantage. The comparison has special value by reason of both asylum officers and the police in each area being engaged, managed, and paid by the same authority, the county or borough council, except in the case of the metropolis. The facts connected with the police are known to all, while the asylum is much withdrawn from public knowledge. It is hoped that when more light is shed, a sense of justice, if it does not prompt, will at least allow of a concession to the equitable claims put forward by the Association on behalf of the staff of county and borough asylums.

The Treatment of Incipient Insanity.

The Lord Chancellor recently received a deputation of the conjoint committee of the British Medical and Medico-Psychological Associations in regard to the provision of legal authority for the treatment of incipient and unconfirmed insanity.

The deputation was introduced by Dr. Farquharson, and Lord Halsbury, by his observations and pertinent questions,

showed that he was keenly alive to the importance of any measures which would favourably influence the treatment of mental disease in the incipient stages. The impression received by the deputation was that the Lord Chancellor was favourably inclined to consider the desirability of legislation as suggested by the committee, although he expressed an opinion that the time proposed (six months) was too long. This criticism, however, is in itself a strong evidence of his lordship's general acceptance of the principle.

This favourable reception of the opinions of the Associations is without doubt due in great measure to the importance attached by the Lord Chancellor to their representations, and is a distinct encouragement to the Parliamentary Committees of the Associations, whose arduous work has won the recognition of which this success is an evidence.

The Criminal Evidence Act.

The judicial development of the Criminal Evidence Act, 1898, has made considerable progress during the past few months. It has now been decided (Queen *v.* Rhodes) that the inquiry before a grand jury is not a "stage of the proceedings" at which a prisoner is entitled to give evidence, and that there is nothing in the new Act to affect the right of prosecuting counsel to sum up the case against an accused person, where it otherwise exists, or to prevent a judge from commenting on a prisoner's failure to go into the witness-box. So far it cannot be said that the statute has worked otherwise than well. Two fresh points have arisen, however, and are awaiting judicial solution. It has been suggested that a magistrate, before whom a prisoner charged with an indictable offence gives evidence, has no right to order his discharge if he is satisfied that the allegations against him are unfounded. This view of the law is almost certainly incorrect.

The other difficulty has been with regard to the prosecution for perjury of a prisoner who gives false evidence in the witness-box. As a matter of strict law, there seems no doubt that such prosecutions are competent. But the judges are about to con-

sider in council the conditions under which they ought to be permitted, as the freedom with which several members of the Bench were at first disposed to threaten them was having the effect of deterring prisoners from availing themselves of the right conferred on them by the statute.

Constructive Murder.

Mr. Ambrose, Q.C., shortly before his appointment as Master in Lunacy, introduced into Parliament a bill to make by implication the act of bringing about abortion no longer a capital offence. Although Mr. Justice Phillimore was most unfairly criticised in connection with the case of Lieutenant Wark, the result of that *cause célébre* shows that public opinion in this country is ripe for an amendment of the law in this direction. In one of the earlier abortion cases of the present legal year, the Attorney-General, who prosecuted for the Crown, propounded the theory that a homicide under such circumstances might amount to constructive murder only, if not to mere manslaughter. The legal soundness of this theory is, however, very doubtful, and it is much better that the problem should be solved by direct legislation.

The Lunacy Law and Borderland Cases.

The treatment of mental disease in its early stages has received so much consideration of late that the case of Regina *v.* Reichardt, tried at Kingston-on-Thames on January 4th, 5th, and 6th of this year, is of especial interest at this moment, and owing to the importance of the questions raised, demands serious attention.

The case, briefly stated, is that a lady suffering from mental depression and hysteria attempted suicide, recovered, repented, and was recommended by an eminent physician to go to the house of Dr. Reichardt for care and treatment. She was seen at Dr. Reichardt's by a prominent specialist, who decided that,

though of unsound mind, she was not certifiably insane; she apparently quite convalesced, but on the receipt of unexpected depressing news escaped and committed suicide.

Dr. Reichardt was indicted by the Commissioners in Lunacy for receiving lunatics, contrary to the Act. No evidence, however, was adduced in regard to other lunatics, and the jury found a verdict of "Not guilty."

The practical issue raised by this prosecution is whether persons who are showing some signs of mental unsoundness are only to be treated in their own homes (if they happen to possess homes) or go to an asylum as voluntary boarders.

Not being certifiable they cannot be legally treated in or out of asylums as lunatics, and if persons who undertake to care for them, become liable to prosecution, there will be for many no means of obtaining the care and medical treatment which their disease demands.

In this particular case it may be urged that there was *primâ facie* evidence of insanity in the fact that the sufferer committed suicide; but in matters indirectly affecting the welfare of large numbers of individuals more than a *primâ facie* case is needed; the antecedent inquiry should at least be sufficiently exhaustive to completely satisfy those responsible for the indictment that a real offence has been committed. Failure to establish the indictment is tantamount to an admission that the preliminary investigation was insufficient, and this is strengthened by the fact that "counts" were advanced in regard to which no evidence was given.

If, on the other hand, prosecution is intended to deter persons from breaking the law in this respect, it should be remembered, as we have above pointed out, that such indictments may prevent persons, mentally affected but not certifiable, from obtaining the treatment they need. It is also important to consider that the class of persons requiring such care is very numerous.

Prosecutions undertaken with this deterrent view could only be justified by success, and the danger arising from them is that they would lead to unnecessary certification in transient cases of mental disorder.

The legal recognition of the stage of incipient and unconfirmed insanity will probably not be much longer delayed, and it would be difficult to imagine a case which more completely demonstrated the need for this recognition than the Reichardt

prosecution. Here was a lady, sick and suffering, needing care and treatment which she had no suitable home to supply, not admissible to an asylum, and treated with every care and attention which her condition demanded. There is no complaint on her part of deprivation of liberty, and no allegation of unkind usage.

The question may be fairly asked : what moral offence had been committed ? whether, indeed, it would not have been inhumane if some person, in spite of the terrors of the law, would not have undertaken her care ?

The Lunacy Law intends to prevent persons being deprived of their liberty under the plea of lunacy, and intends to prevent lunatics from being cruelly or improperly treated, but, by permitting the treatment of lunatics under the care of friends, it admits that it does not consider certification as the only condition for the treatment even of confirmed insanity.

The Reichardt prosecution, however, if successful would have made it a crime to undertake the treatment of uncertifiable insanity, would have deterred the better class of persons from undertaking such treatment, and would have deprived many suffering invalids of proper care. The law as it stands is not satisfactory for the public welfare, but is especially unsatisfactory in exposing medical men to prosecution who are acting only on the dictates of professional duty and of the highest humanity.

Poor Law Provision for the Mentally Deficient Class.

At the Poor Law Conference held lately, Dr. Shuttleworth read a paper which shows clearly the lack of provision for mentally deficient children of the State-supported class, and the methods which should be adopted to remedy the existing state of matters. It is to be noted that little progress has been made outside the metropolitan district, although certain localities have done something to meet the want by the provision of accommodation for some 400 imbeciles and idiots in establishments apart from the insane. But even this is a small beginning in face of the fact that poor-law authorities in the country at large should have provided places for some 6000, to bring the proportion up even

to the present standard of the metropolitan district. We have much pleasure in referring our readers to Dr. Shuttleworth's admirable address, which can be procured from Messrs. King and Son, Great Smith Street, Westminster. As we have repeatedly shown in these columns, there is urgent need to guide this matter to a practical issue, by separating the educable from the non-educable children, and by erecting custodial institutions for those of adult age. The annual reports of our asylums have attested the grave disadvantage of receiving into their wards those of the mentally deficient class, and we trust that local authorities will use the powers they possess to emulate the example of the Manchester and Chorlton Unions, where Dr. Rhodes has initiated the establishment of a colony on the Alt-Scherbitz plan.

A somewhat similar class of cases deserving of sympathetic consideration, the insane epileptics, has attracted the special attention of the London County Council. It is found that there are between 600 and 800 male patients suffering from epilepsy in the asylums of the metropolis, and it is believed that many of these will be better treated apart from the insane. A new colony for them, capable of receiving 300, is to be established at Horton. This admirable scheme has our entire approval, for it proceeds on the principles laid down by Dr. Shuttleworth, and marks an effort on the part of the London County Council to individualise and discriminate in the treatment of the terrible aggregation of the mentally affected committed to their charge. We hope to present to our readers a full account of the position of affairs in regard to the housing of epileptics in the next number of the JOURNAL.

The Children of Criminals.

We regret to notice that proposals have been made for the segregation of the children of criminals in special institutions. This well-meaning attempt to enlist the sympathy of the public on behalf of innocent sufferers for the misdeeds of others seems to us a mistaken policy. That these children should be, as it were, ear-marked for life by such a measure is bad enough; but that their environment should be degraded and their moral

training imperilled by constant association and mutual reminiscences is worse indeed. Just as it is the aim of the physician to dilute the insanity of the asylum by the largest possible proportion of staff to patients and by distributing the excited patients to the best of his ability, so should public administration abolish the rookeries of vice and disease, and make speed to detach the children of criminals from the surroundings and influences which threaten their future. The industrial schools of the country have done most admirable work in this department of philanthropy, although they have not escaped from censure and wrongful criticism. We look, however, to home care, under judicious supervision, to afford the best results ; and the occasional failures which have been recorded in the working of this system in its present tentative condition form no solid ground for the proposals to which we thus adversely refer.

Peculiar People.

The vagaries of men and women who retain so much of sanity as to enable them to keep outside asylum walls are of deep interest to the philosophic psychologist. We stand amazed at the waves of eccentricity which periodically overwhelm humanity. What tincture of common sense is there in "Christian Science?" What subtle something is there in its doctrine to attract people of education to its temple in London? The eternal gullible is, of course, always with us, and the promise of hope leads any whither if only the trumpet-call be clear and insistent.

It requires some patience to examine the teaching of the Rev. Mary Baker G. Eddy, and to set forth her method of healing disease. Nevertheless, the *Westminster Budget* and the *British Medical Journal* have done what they could to elucidate the mysteries of her great discovery, and two recent inquests have enlightened us concerning the results. In truth, this farrago of pitiful nonsense, falsely heralded as Christianity and Science, is a very definite evil, and we cannot but regret that the defendants in the case of Harold Frederic escaped on a verdict of not guilty. When a man is weakened by disease,

unable to form a clear judgment regarding his position, and so reduced in will power as to be careless of what the future holds, surely the law ought to protect him from himself and still more from those who assume heavenly gifts in return for earthly payments.

It is true that, on an important decision of the judges in a court for the consideration of Crown cases reserved, Thomas George Senior was sentenced to four months imprisonment with hard labour for the manslaughter of his child because he had not supplied it with medical aid or medicine, though aware that it would probably die. That verdict of *guilty* will do something for the protection of infant life; but there is a second childhood consequent on disease and degeneration which equally requires protection, and we trust that the law will be so amended or so interpreted as to give Peculiar People short shrift when they endanger adult human life and augment adult human suffering.

Colonial Divisions.

Letters lately received from Australia and Canada promise well for the establishment of colonial divisions of the Medico-Psychological Association. At the fourth annual conference of the medical staff of the Department of Hospitals for the Insane of Victoria, held in October last, Dr. M'Creery moved "That an intercolonial Medico-Psychological Society be formed, and that invitations be sent to all asylum staffs of the various Australasian colonies to be present next year in Melbourne, with a view to form an association which may become affiliated with the Medico-Psychological Association of Great Britain and Ireland." This was adopted unanimously, and we trust that the scheme, now fairly floated, will be carried to a successful termination.

We also understand that the Quebec Medico-Psychological Association is about to take steps to induce all the provinces of the dominion to form a colonial branch. Dr. Chagnon has taken this matter in hand, and we have assurances from that highly esteemed veteran, Dr. Clark of Toronto, that the plan has his entire sympathy and will engage his active co-operation.

No doubt there are details of importance which will require consideration before this legitimate and desirable development of the Association is completed, but these present no real difficulty. We shall all welcome the helpful aid of hands across the sea.

Part II.—Reviews.

Organsafttherapie. Von Dr. G. Buschan, in Stettin. Separatabdruck aus der *Real-Encyclopädie der gesammten Heilkunde*, &c. Dritte Auflage; Herausgeber u. Redacteur, Prof. Dr. Albert Eulenburg, in Berlin. (Urban u. Schwarzenberg, Wien, 1898.)

The magical results of thyroid treatment in myxœdema form one of those demoralising discoveries which lead to the most wildly empirical experiment, not only with the original drug, but with all other substances which can by any possibility be squeezed into the same category. Of the extent to which this has been the case one gains a vivid idea when results are summarised in such a monograph as the present very interesting and fairly complete digest of the literature of the subject. Such a digest—which must represent an immense amount of labour—when prepared by a man properly qualified for the task, as in the present instance, is of great value for the sake of the genuine wheat which it contains, albeit hidden in a considerable amount of chaff.

All treatment by organic extracts traces its origin to Brown-Séquard's celebrated experiments with testicular juice, and to the theory based on them that certain organs (or, in its furthest development, that all the organs and tissues of the body) produce an "internal secretion," a substance which is essential to the well-being of the entire organism. If in its fullest form this theory has not gained acceptance, it is certainly not for want of therapeutic experiment.

Dr. Buschan divides the organs and tissues, regarded from this point of view, into three groups, viz. (1) glands having ducts, (2) ductless glands, and (3) non-glandular structures; and under these heads details the results of investigation, therapeutic or otherwise, with almost every organ of the body. To give even a brief account of all of these would be beyond the limits of the present notice, and we shall therefore confine ourselves to such as more especially concern the alienist and neurologist.

Taking first the treatment with extracts from the testicles, the author tells us that more than 1000 therapeutic experiments have been tried, and holds that, as the result of these and of other considerations,

testicular extracts have been proved to be of great value in the treatment of various diseases. Their action is, he holds, not specific, but tonic, and the results are probably due to the presence of *spermin* ($C_5H_{14}N_2$), an organic base normally found in human blood, which has been separated by Pöhl. It is thought to increase the oxidisability of the blood. Whatever be the mode of working, administration of testicular extracts, or of spermin, produces after a time a general stimulation and augmented action of the nervous system, shown by increased mental activity and power of work, improved respiration, regulation of the action of bowels and bladder, and increased sexual impulse. At the same time the temperature and pulse-rate return to normal, there is a larger amount of hæmoglobin in the blood, the appetite improves, the muscles and the body generally gain in weight, and the power of physical endurance is heightened.

Excellent results are stated to have been obtained in senile weakness, and, indeed, in other forms of weakness also, even that due to wasting diseases. But the treatment has, it is claimed, been most successful in nervous cases, more especially in tabes. Out of 342 cases of this disease, treated by various observers, 314 were permanently improved, the lightning pains disappearing, while muscular sense, sexual power, and control of micturition and defæcation tended to be re-established, and atrophies vanished. In one case treated by Buschan himself, however, such severe symptoms (lightning pains, insomnia, excitement, &c.) were caused that the drug had to be stopped. Treatment should be continued for months, a daily dose of 3—5 grammes of the undiluted fluid being given. Two cases of Friedreich's disease also showed marked improvement, and of 119 cases of other forms of organic nervous disease—disseminated and other scleroses, and pseudo-hypertrophic paralysis—8—9 per cent. gave similar results. Amongst functional nervous diseases, 50—60 per cent. of cases of neurasthenia showed improvement, and 25 of 27 cases of paralysis agitans; while 4 out of 5 cases of chorea became better, one being, however, made worse. But Baudin failed to obtain any result in neurasthenia, and Buschan states generally that functional diseases are not so favourably influenced as organic.

As regards the employment of this treatment in mental disease, nothing certain is as yet known, the results being contradictory. It is stated, however, to be of use in stuporose melancholia, though its mental effect is only temporary, the improved nutrition and circulation alone persisting.

It may be administered in the form of "séquardine," 2—8 grammes being injected daily; in dried preparations (tabloids); or Pöhl's spermin may be given.

The next place is assigned to treatment with ovarian substance. Passing over loss of thyroid function and various ailments connected with the female organs of generation, and chlorosis, in all of which we are assured that the drug has been given with good effect, and noting that a case of epilepsy has been treated with marked benefit, we find that ovarian substance has been tried in seven cases of mental disease. Three of these, female cases of confusion and melancholia, were cured; in two more, a woman suffering from hystero-epilepsy and a male maniac, there was some improvement; while two cases, a woman whose

ovaries had been removed and who was suffering from hypochondriacal melancholia, and a male hystero-epileptic, were made worse. Some cases of exophthalmic goitre are said to have been benefited.

The dried gland in tabloids (2—6 per day), glycerine extract (a syringeful per day), or fresh gland (cow) in daily doses of 5—20 grammes, may be given.

Setting on one side the treatment of urinary disorders by kidney extracts, and of various affections more or less connected with the liver by hepatic substance, as well as (with more regret) the interesting account of the relation of the pancreas and its extracts to diabetes, and also the still more doubtful treatments with the prostatic, parotid, and mammary glands, we come to the ductless glands, this division being opened by a good and full account of the results of thyroid treatment.

Beginning with myxœdema, the author passes on to cretinism, in which, under thyroid treatment, the children begin to develop mentally, to show interest in their environment, and to improve in their habits. Remarkable growth also takes place in the bones, even in patients sixteen or eighteen years of age; in a case of Bramwell's, for example, aged sixteen, there was a growth of $6\frac{1}{2}$ inches in seven months. Thyroid treatment has also been found useful in arrested growth from other causes than cretinism (rickets, onanism).

Improvement in goitre, we are told, takes place chiefly, though apparently not solely, in purely parenchymatous or simple cases, which only make 10—20 per cent. of all cases. In about 100 cases of exophthalmic goitre only 15 per cent. were improved (6 per cent. cured), while 15 per cent. became worse. The author is of opinion that some cases of this disease are due to a primary thyroid lesion, these being benefited by the treatment.

As tetany occurs in myxœdema and after thyroidectomy, the treatment has been tried, in some cases with good results; but this procedure is not devoid of risk, as some unfortunate effects, such as epileptoid seizures, have been reported. In acromegaly thyroid ingestion has been tried without result.

Thyroid treatment in insanity is briefly and rather imperfectly noticed, and justice is scarcely done to Dr. Lewis Bruce's theories as to the mode of action of the drug, only one (reaction after infective fever) being mentioned. Dr. Buschan dissents from this theory, declaring that thyroid gland is "by no means a febrogenous substance," the rise of temperature in Bruce's cases being, in his opinion, unquestionably due to chance admixture of noxious materials. This statement, which is in direct opposition to the experience (we believe we are right in saying) of every observer in this country who has used this method, seems to us to show that the author has failed to grasp the points of Bruce's mode of administration (by large doses for a short time), and we do not see how Reinhold's view (that the mental improvement is due indirectly to the bettering of the physical condition), which he quotes with approval, is opposed to that of Bruce, though the latter thinks that thyroid is, in addition, a cerebral stimulant.(1) Furthermore, it is not necessarily the febrile temperature, but rather the general toxic condition, that produces the favourable reaction. No mention is made of the conclusion which we fancy most observers have

arrived at, that the good results undoubtedly produced by this treatment in a certain proportion of cases are apt to be only temporary.

A large number of skin diseases have been treated with conflicting results, and the author speaks highly of the effects of the drug in obesity, and concludes with a long list of diseases of all kinds in which it has been tried, generally with some good result, if we are to trust the original experimenter. Of these we need only mention progressive muscular atrophy (good results), paralysis agitans (two cases, no effect), and epilepsy, of which one cure and two cases improved are reported, all in young subjects.

The physiological effects of the drug are next enumerated, and consist of increase in the excreted nitrogen and phosphoric acid (the latter not constantly), urine (probably from the diuretic action of the urea), and carbon dioxide, the ingestion of oxygen being at the same time augmented. The number of the red corpuscles in the blood, and also the percentage of hæmoglobin, are raised. Increased metabolism is therefore indicated, and the author considers that this is probably a sufficient explanation of the symptoms grouped under the name of "thyroidism," viz. malaise, sense of head-pressure, exhaustion, drowsiness, pains in the trunk and limbs, nausea, sense of faintness and heat, and rapid pulse. Other unpleasant effects he would set down as "pathological thyroidism," which is, in fact, not thyroidism at all, but due to impurities (ptomaines or leucomaines) in the drug used. One such effect, however—increased temperature—is, as we have remarked, certainly not so in all cases. We may note the statement, on the authority of Mahille, that arsenic obviates various unpleasant symptoms, viz. tremor, increased pulse-rate, and neuralgic pains.

The author believes the active principle of the thyroid to be *iodothyrin*, a substance first isolated by Baumann, and found in the thyroids of the sheep and pig, as well as in man. The dose is 0·3 to 0·6 milligrs., and may be given in the form of a preparation made with milk-sugar, which was introduced by Roos (dose 1—2 grammes per day). This the author considers to eliminate the risk of "pathological thyroidism," while giving the same results as entire thyroid. The other well-known modes of administration are also enumerated, but there is no mention, we observe, of "thyrocol."

Administration of thymus is said to produce an improvement in the general condition, which is probably the explanation of the favourable results claimed to have been obtained with it in exophthalmic goitre and other diseases; and the same, perhaps, holds true in the case of splenic treatment, which produces increase in the number both of red corpuscles and leucocytes, and in the hæmoglobin, so that good results are stated to follow its adoption in various forms of anæmia. Exophthalmic goitre is also said to have been benefited. No mention is made of the use of this drug in insanity, which Dr. Campbell Clarke ([2]) and Drs. Bois and Kerr ([3]) state to have adopted with good effect in a number of cases; but their observations are so recent that this was, perhaps, scarcely to be expected. Of 22 cases so treated by the last-named observers (12 male and 10 female), there was mental recovery in 8, and physical improvement in 17. The recoveries were—melancholia 3, mania 1,

stupor 4; and the writers consider the effects to be sometimes due to direct action, at others to the improvement in the physical state. Dr. Clarke believes the drug to be safer in its action and more permanent in its effects than thyroid, if the results produced are not so phenomenal. Bois and Kerr find capsules of the liquid extract, taken at least half an hour before meals, to be the best mode of administration. Buschan mentions watery extract, glycerine extract (which is said to produce cramp of the stomach and anorexia unless in small doses, 10 drops thrice daily), tabloids of dried spleen substance, &c., but says that the dosage has not yet been fully worked out.

The use of the supra-renal capsules suggested itself, of course, in Addison's disease, in which good results have been obtained, though, except in one case, they do not seem to have been permanent, while many cases were unaffected, and some made worse (one died on the eighteenth day of treatment). The effect of the supra-renals in contracting the vessels and raising blood-pressure suggest their use in other conditions (cardiac weakness), and Gottlieb found (in animals) that a heart stopped by chloral poisoning could be started again by their administration. As regards the physiology of the gland, the author thinks that its function is to destroy pyrocatechin (which was found in the supra-renals by Mühlmann), and that the symptoms of Addison's disease are really due to pyrocatechin poisoning. The active substance, to which the name "sphygmogenin" has been given, is in the medulla. Dose, 1 raw adrenal (of lamb or sheep) daily, or as extract. Tabloids may also be used.

Exhibition of pituitary gland substance has been tried in about twenty cases of acromegaly, and produced improvement in the general condition, though the bones remained unaffected. Treatment with bronchial glands in pulmonary tuberculosis, and with lymphatic glands in Hodgkin's disease, need only be mentioned.

Of the non-glandular structures of the body very many have been administered therapeutically—brain and nervous substance, bone marrow, lung, myocardium, muscle, uterine tissue, Fallopian tubes, ciliary body, seminal vesicles, nasal mucous membrane, &c., but of these only two need be further alluded to. Treatment with healthy spinal cord was found by C. Paul to give much the same results as that with testicular fluid in improvement of general health, and loss of various pains and of tenderness. Nervous substance has been given in neurasthenia with good effect, though Buschan himself obtained no action whatever in a series of cases. In epilepsy, tabes, senile asthenia, psychoses, &c., the physical and mental condition is said to have improved, and Cullerre saw amelioration in curable insane cases during the hours following its administration. It may be given as aqueous or glycerine extract of the brain, chiefly of its grey substance, or as a dried preparation.

Bone marrow gave good results in anæmia and leukæmia, but not in pernicious anæmia. Rickets and other diseases are said to have been favourably influenced. Fresh red marrow, glycerine extract, or a dried preparation may be given.

In conclusion, we may recommend Dr. Buschan's summary as being on the whole a good and fairly complete (so far as we can judge) if

perhaps over-sanguine *résumé* of the very voluminous literature of the subject.

(1) *Journ. of Ment. Sci.*, Oct., 1895, p. 639.—(2) *Edinb. Med. Journ.* (new series), vol. iii, p. 152.—(3) *Brit. Med. Journ.*, 1898, ii, p. 684.

Philosophy of Knowledge: an Inquiry into the Nature, Limits, and Validity of Human Cognitive Faculty. By GEORGE TRUMBULL LADD, Professor of Philosophy in Yale University. Longmans, Green, and Co., London. Price 18*s.*

At starting, the definition of a metaphysician as a blind man searching in a dark room for a black hat, the hat in question not being there, strikes us not inappropriately, for there are many searchings in this book for something which does not appear to be there.

Professor Ladd is a philosophical writer, well known on both sides of the Atlantic, and this last volume of his, over 600 pages, dedicated "to those who by serious and prolonged inquiry, however sceptical, aspire to approach the truth," ably sustains his prominent position. This book is an attempt to get at the origin of knowledge—knowledge being "itself the establishment of a relation between the revealer, the absolute self, and the self to whom the revelation comes," and although the author in the preface states that the position he is placed in by his own independent investigations is somewhat antagonistic to and critical of the position of the critique of pure reason, he yet supports the assertion that this question has in some sort been settled once for all by the critical work of Kant.

This research is based first and foremost upon psychology, which is looked upon as a propædeutic, and the inquirer who is defective or slovenly in his analysis of the human mind is warned of his failure to grasp the significance of the problem of knowledge; for it must be through the analysis of mental processes or the "content of consciousness" that the problem of knowledge can be properly pursued; in other words, through the science of psychology. But the work in its aim is metaphysical, and Professor Ladd is less in sympathy with the biological, anthropological, and psychological study of the growth of mind than he is with its philosophical aspect. Indeed, he makes less acknowledgement to the experimental psychologist than seems to be the tendency of the present day. The text exercises a solicitude as to the *truth* of man's being and the *validity* of his knowledge. Throughout, the phrase "stream of consciousness," as showing the continuity of mental processes, is used. It originated in America, and has become generally adopted by English psychologists. For our part we feel it is better to give an indication of what the book contains than definitely to review it. To prepare the way for the argument of the work the question is asked early, "Why from the biological standpoint is man—who, like the other higher animals is concerned with eudaimonistic good—not satisfied with the appearances of things? Why should he wish to probe deeper and

to search for truth or reality?" But from the anthropological view the evolution of the race fails to account for this need, which he describes as an instinctive metaphysical faith. It is when we consider the evolution of science as a "growth in actual cognition" that the epistemological problem is introduced, as opposed to a mere presentation of senses, trains of associated ideas and abstract concepts. Science is looked upon as a hypothetical syllogism—

If A is B, C is D.

Such a science is not concerned with the actual relation of cause and effect, and such a science is therefore not knowledge, much less truth. Ladd explains *truth* to be a universal assumption of a mental representation having its correlate in reality, *i. e.* in the actual being and matter-of-fact performance of things—the mind of man which is self, and the object of his knowledge which is thing; this objectivity is the implicate of every truly cognitive act; there is a subject and a *trans*-subject. The study of this problem is recognised as an influential factor in the development of the reflective thinking of man. The alternate psychic element is, "I know;" and "My cognition is a process in my consciousness" is a presuppositionless and absolutely undeniable psychological assumption. Ladd traces ideation and object to a common root of consciousness, and points out that they exist in the beginning of psychic life, forming the original unity of our perceptive life—the "unity of apperception." Epistemology (or noëtics of Sir Wm. Hamilton) differs from the metaphysics of ethics, the philosophy of art, of nature, and of religion, as well as of rights and of history, insomuch that the latter have a complicated network of presuppositions which is the very substance of what holds them within their proper bounds. The very aim of epistemology is to get behind and underneath all assumption, and to deal with the human cognitive faculty itself. It is the analysis, explanation, import, and proof of cognition, taking cognition to mean a modification of consciousness and an implication of an external thing.

Kant has asserted that "Human reason has this peculiar fate, that, with reference to one species of its cognition, it is always burdened with questions which it cannot cast aside; for they are given to it by the very nature of reason itself, but they cannot be answered because they transcend the powers of reason," and the problem of the book becomes the philosophy of knowledge, in so far as it deals with the concept of the true. It must commence upon a scientific psychology of the developed human consciousness—the consciousness of a being already apperceptive and self-conscious; but psychology is not enough; a critical inquiry is raised as to whether and how far the forms of cognition coincide with the forms of existence; in other words, the relations between certain states of consciousness and what we conceive of as "the really existent," and includes here metaphysics or the philosophy of being which deals with the concept of the real. It presupposes one general fact alone, and that is "I know," which is the one primary datum of knowledge. The philosophical problem of knowledge, when investigated with critical thoroughness, takes nothing for granted beyond this ultimate and indisputable datum of all science. This "I know" is the datum and fact of knowledge itself, which is

subjective and has a conscious process in time as well as a trans subjective or an objective cognition. In an inquiry into the nature extent, and validity of knowledge, the concepts of ethics and the philosophy of religion must of necessity be touched upon; for know ledge cannot be divorced from faith nor from the life of action as it bears upon conduct. But Prof. Ladd very rightly avoids contested problems in these departments, and, although we think he has an undue tendency to scoff at the experimental psychologists, he endeavours successfully to bring the unity of man's total life into one with the reality of the universe. His history of opinion upon this subject will well repay careful reading; for he commences with Socrates and Plato as the first to treat of the "pretensions of reason to transcendent insights." He points out the impossibility of giving a wholly empirical account of the origin of cognition; and the necessity of recognising elements that for their explanation demand an appeal to the reality and external existence of the ideal are shown to be tenets in the Platonic doctrine of knowledge. Throughout does Plato emphasise the dependence of knowledge on desire, aspiration, virtue, and character, whereas Aristotle, unlike Plato's ethical origin of knowledge, derived it from dialectical induction and logical demonstration that knowledge was an end in itself evolved from individual observation to perception, and from perception, by means of memory, to experience. The influence of Origen, Augustine, Abelard, Descartes, John Locke, and Leibnitz, ending with Fichte, Hegel, and Schopenhauer, are interesting to read, and the chapter upon the psychological basis of knowledge particularly so. Identity and difference in opposition to the old association theory of knowledge find a place, and the volume concludes with chapters on idealism and realism, dualism and monism, the real and the absolute. To the student of psychology, this, one of Prof. Ladd's last works, well repays earnest study and thought, and we have derived much real pleasure in its investigation.

Aristotle and the Earlier Peripatetics, being a translation, in two volumes, by Dr. D. F. C. Costelloe, M.A., and J. H. Muirhead, M.A., from Zeller's *Philosophy of the Greeks*. Longmans, Green, and Co., London. Price 24*s*.

These volumes, each of over 500 pages, give a complete record of the Aristotelian philosophy, a system of speculation which took a strong hold, not only of the mind of Greece but also of Western Europe. Aristotle pursued a middle course between the idealism of Plato and the sensationalism of Epicurus. He was the scholar of Plato and the preceptor of Alexander the Great. Born at Stagyra, in Macedonia, four centuries before Christ, he studied medicine in his youth, but the influence of Plato probably caused him to investigate the origin of knowledge and his maxim, towards which our latter-day experimental psychologist has distinct leanings, that "there is nothing in the intelligence which was not first in sensation" held sway until the time of

Leibnitz. He taught the distinction between the contingent and the necessary, the relative and absolute, but his fame rests not so much upon his metaphysical as upon his logical system. It was by his didactical speculations that he so powerfully influenced the mind of man. Under his teaching the chief merit was considered to be ability to wrangle and dispute according to the rules of his subtle dialectics. The thraldom of the Stagyrite was a hindrance to the progress of knowledge, and was probably not ended until the Reformation, when Descartes, Lord Bacon, and others renounced all subjection of human thought to this idol of the age. Vain subtleties, useless questions, and ridiculous distinctions were then ended, and the mind of man was emancipated for that spirit of independent inquiry in the discovery and defence of truth, which characterises the modern time.

Since Bekker, in 1831, published the works of Aristotle, and since Friedrich Ueberweg, of the University of Königsberg, wrote his *History of Philosophy*, no more colossal work than Dr. Zeller's has been presented to the public, and we are grateful to the translators for this eminently readable reproduction for English scholars.

A Manual of Psychology. By G. F. Stout, M.A., late Fellow of St. John's College, Cambridge, Lecturer on Comparative Psychology in the University of Aberdeen, Lecturer in the Moral Sciences, Cambridge (University Tutorial Series). London: W. B. Clive. 1898. 8*s.* 6*d.*; or two vols. 4*s.* 6*d.* each.

This is a most admirable manual of psychology, and one we can thoroughly recommend. It is essentially a student's book, and one suitable for the higher examinations. The author was most anxious to avoid sketchiness, and in this he has been most successful. But at the same time the "cut and dry statements" are clothed in "living flesh and blood," making a book which will form interesting reading for the general reader; and the happy light in which he puts the most difficult problems of psychology will cause its perusal to be a source of pleasure to his more critical brother psychologists. The subject is treated from a genetic point of view, *i. e.* the various processes in mentalisation are taken up in order as they were evolved. Three chapters form an introduction, indicating the scope of psychology, its data and methods, and the relationship of body and mind. Although his teachings are on the whole orthodox, yet he treats with fairness, even with indulgence, the more advanced views, which to certain psychologists are nothing less than heresies. His sympathies incline to the Introspectionist school. He draws a hard line of demarcation between psychology and all the physical sciences. "Psychology does not directly and primarily aim at increasing our knowledge of the material world or any part of it." He is equally clear in his distinctions between psychology and logic, the theory of knowledge, ethics, and æsthetics. Logic is pre-occupied with the distinction between truth and error. The theory of knowledge

takes the question further and inquires how truth and falsehood are possible at all, and how the finite individual can be aware of the universe to which he belongs. Ethics inquires how we ought to will, not how we actually do will. Æsthetics distinguishes between beauty and ugliness. Psychology differs from them all in that it deals only with the laws that govern these cognitive processes. With regard to the theory of knowledge, the possibility of thought is assumed by the psychologist, and the relationship of subject and object is presupposed by him as a datum. Psychology differs from ethics in that it deals with the process of volition as it actually occurs, without reference to its rightness or wrongness; and, as regards æsthetics, it only inquires as to how things come to appear beautiful or ugly.

The chapter on "Body and Mind" is a most excellent one. He discusses three theories of the immediate connection between conscious and nervous processes. He rejects what he describes as materialism completely. Of the other two he inclines to parallelism rather than to interaction, although he recommends students to avoid hastily deciding between them. The question is one of the most difficult humanity ever tried to answer. Materialism, although it is a view which in the present state of our knowledge cannot even be promulgated, is one which ought not to be lost sight of, and may be capable of great possibilities. Psychologists have from time immemorial drawn a hard and fast line between brain and mind and have never yet emerged from the realms of nebular hypotheses, and can therefore ill afford to lose any line of investigation. Mr. Stout assumes throughout his book the validity of the doctrine of psycho-physical parallelism on the grounds that it covers the known facts and forms the most convenient working hypothesis.

The book is written in a terse and lucid manner; the similes which are used frequently are clever and well chosen; and reference is made, for purposes of illustration, to the mental life of animals and the lower races of mankind.

A Primer of Psychology. By Edward Bradford Titchener. New York: The Macmillan Company. Pp. 314.

In the preface to this book the author confesses that the writing of an elementary treatise on psychology is, in the present state of our knowledge, no easy matter. A perusal of the work before us will amply confirm this view, and although sufficient praise cannot be given to the manner in which the author has skilfully overcome the difficulties, we question very much whether the means employed, at evidently great personal labour, have successfully accomplished the aim in view. He further states in the preface that he has endeavoured to introduce the subject to his readers "by the way of a general account of scientific method" rather than "by the way of brain anatomy and brain physiology." The result of this presentation of the subject is to confirm the view held by many of the impossibility of a divorce between physiology and psychology. This standpoint necessitates

either that the writer should take it for granted that his readers are sufficiently versed in physiology to follow his teaching without explanation, or that the problems of that science must be simplified for their benefit as he proceeds. Whichever alternative is chosen, the result cannot but be mystifying to the student unacquainted with elementary anatomy and physiology.

As an introduction to the study of psychology the book is otherwise accurately written, unsparing in detail, and has the great merit of being at once systematic and simple. The questions and exercises at the end of each chapter will probably form an important aid towards a fuller and more practical knowledge of the subject.

Exception must be taken to the author's unsatisfactory definition of the terms "mind" and "consciousness." In his opinion the two terms are apparently, if not synonymous, at any rate co-extensive. Such views are unfortunately almost universal in works on scientific psychology, and any criticism of them is therefore controversial; but when it is pointed out that the attitude of the writer of a book on psychology towards the existence of the "unconscious" mind determines the whole scheme and constitution of the work, it is not too much to expect an expression of opinion upon the subject, which is ever engaging more and more attention. A fuller recognition of the "unconscious" in mental life would vastly enrich our knowledge, and would spare us those starved interpolations concerning "instinct" which disfigure most modern works on psychology.

Clinical Lectures on Mental Diseases. By T. S. Clouston, M.D., F.R.C.P.E. London: J. and A. Churchill, 1898. Fifth edition. 8vo., pp. 727, illust. xix. Price 14*s*.

We notice the new issue of Dr. Clouston's book to congratulate him on the honourable position which this clinical manual has achieved. We are not aware that any other work on insanity has run to five editions; and, indeed, there seems to be no reason why the success already attained should not continue indefinitely. The secret of this success is not far to seek. The life-like fidelity with which the clinical illustrations are presented stands obvious to all.

Although this last edition is largely a reprint, it embodies new observations made within the last two years; and four plates have been added, from drawings by Dr. Ford Robertson, to show recent advances in reference to chromatolysis and other changes in the neurons.

Medical men will, as heretofore, find these brilliant records of Dr. Clouston's long experience indispensable for the purposes of reference and instruction.

The Criminal Insane in the United States and in Foreign Countries. Report by S. J. Barrows, Commissioner for the United States on the International Prison Commission. Washington Government Office, 1898.

This valuable and interesting compilation deals with the subject in a comprehensive and instructive manner. The report is divided into three parts. The first portion consists of a short historical *résumé*, followed by a critical analysis of the methods of procedure in dealing with the criminal insane in the United States and also in foreign countries. The second part includes the answers returned by the authorities of the various states of the Union in reply to a series of questions issued by the Commissioner. The third portion is devoted to the replies received from foreign countries.

With reference to the procedure in the United States, we are informed that whenever a plea of insanity is made at the commencement of a trial the obligation to take account of this plea is everywhere recognised, but the methods employed in order to determine the question of insanity vary considerably. In some states the trial proceeds in regular course, and the jury express their opinion as to the mental condition of the accused in rendering their verdict. In other states the trial is suspended until the question of insanity is settled. Either a special jury is impanelled to decide the question, or it is determined by a special commission of experts appointed by the judge. The following illustrations are cited:—In the state of New Jersey the presiding judge may call to his assistance competent physicians and other credible witnesses; a special question is put to the jury and expert evidence presented. In this the court may impanel a jury to determine the question of insanity. In North Dakota, Colorado, Georgia, Missouri, and Montana the case is uniformly submitted to a special jury simply to decide the existence of insanity. In Montana two medical experts must sit on the jury. In Nevada it may be submitted to a regular or special jury, but the trial is suspended until the question of insanity shall be determined by the jury. In New York a commission of three disinterested people is appointed, but when the defendant's insanity is made an issue at the trial and before the jury, the jury must be instructed, if they acquit him on that ground, to state the fact with their verdict. In Illinois the sanity or insanity of a person charged with crime is not made a separate issue at the trial, but if insanity is set up as a defence, this issue goes to the jury and is considered together with the criminality of the accused. In Florida the question of insanity is not committed to a jury, but is decided by experts. The debateable question of treating the criminal insane with cases of ordinary lunacy is discussed and answered in the negative. The answers returned with reference to the procedure in England are rather sketchy and do not cover the whole ground. Nothing is said respecting persons found insane before trial, and the question of "unfitness to plead" is not mentioned. Nevertheless the whole report betrays evidence of careful drafting and will well repay perusal.

L'Alcoolisme (*Alcoholism.*) By A. Jaquet. Suite de Monographies Cliniques sur les Questions Nouvelles en Médecine, en Chirurgie, en Biologie. (Series of Clinical Monographs on New Questions in Medicine, Surgery, and Biology.) No. 5. Paris: Masson et Cie., 1897, roy. 8vo, pp. 40, fr. 1.25.

The work under notice is a pamphlet in the valuable series of monographs published by Masson et Cie., Paris. It is quite up to the reputation of French literature for scientific insight into the subject with which it deals, and one wonders why we do not have in England anything nearly so good; certainly not from a scarcity of material suitable for investigation. There is nothing to criticise in the brochure. It is a *résumé* of the subject, not explicitly intended as an original contribution; and as a concise study it is wholly admirable. The reviewer's function is only to indicate the scope of the pamphlet.

The introduction is an example of the kind of thing which Archdall Reid properly deplores,—an unnecessary dirge over the ravages of intemperate drinking and the indifference of society—but it only lasts a page. Immediately thereafter we enter upon valuable matter. It is unnecessary to recount the whole scope of the work; it touches upon everything of interest. The question of the intoxicative importance of the various alcohols and of the volatile adjuvants in beverages is well summarised; and the wise conclusion is arrived at that pure ethylic alcohol produces alcoholism, though other alcohols, flavours, and pigments aggravate its effects. Facts are also cited relevant to the importance of the methods of administration of alcohol, the idiosyncrasy of the individual, the constitutional qualities which condition a cumulative effect, and those which, under alcohol, make for or against resistance to disease. In this, the last subject, a good deal is said, and it ushers in a few pages of vital statistics—the relation of alcohol to mortality. The name alcoholism is thus made to refer to the effects in general of alcoholic excess and not exclusively to that state which we usually designate by the name. Discussing the symptoms of alcoholism in the individual, the author, as is usual, treats the subject upside down. (The invariable habit of authors in this regard is quite remarkable.) The visceral complications,—digestive, hepatic, arterial—the sensory and motor symptoms are discussed; then follows an account of the moral, the volitional, defects, as if these were always secondary.

The remedies for alcoholism are lightly but suggestively discussed,—measures applicable to the drunkard, to society, to the trade—and they are well treated. It is characteristic of French authors of this class that they are not content to discuss the nature and the treatment of alcoholism clinically, but must needs preach social reforms at great length—as when one might, in discussing typhoid fever or smallpox, dilate at length upon the social customs which condition these diseases. But here again we have good work.

The brochure can be commended to students of alcoholism and of the drink question as a very good sample of the excellent work which Frenchmen do in this connection, and of a scientific method and point of view which is sadly lacking in the writings of Englishmen and Americans.

Leçons de Clinique Thérapeutique sur les Maladies du Système nerveux. Par GILLES DE LA TOURETTE. Paris: E. Plon, Nourrit et Cie., 1898, pp. 482.

This, as the title indicates, is not a systematic work, but a series of clinical lectures on various forms of nervous disease, delivered by the author during the past few years. The subjects treated of include cerebral hæmorrhage, neurasthenia, epilepsy, hysteria, facial neuralgia, and migraine, morphinism, Ménière's disease, club foot, syphilitic myelitis, and locomotor ataxia. Some of these letters have been published previously in book form, and one at least of them (Les États Neurastheniques) has been reviewed in the pages of this Journal. The special feature of the lectures is the avoidance of all anatomical and pathological description, except what is necessary for the elucidation of the subject, and the attention which the author devotes to clinical diagnosis, prognosis, and treatment. In most treatises on nervous disease we are used to technical descriptions of symptoms based upon anatomical and physiological principles, and to diagnoses founded upon technical details, which, however valuable and essential, do not form entertaining reading for the ordinary medical practitioner. Moreover, in ordinary books on neurology, treatment occupies such a subsidiary position that one is apt to forget in the detailed description of the disease the fact that treatment is of any service at all. It is, therefore, a positive relief to read a book in which treatment occupies a first place, and in which diagnosis and prognosis are as simply and clearly written as if the author were treating of phthisis or of one of the continued fevers. The great merit of the book is the simplicity and lucidity of its style, and the way in which the author presents his essential facts, so that if once carefully read they can scarcely ever be forgotten. We question very much if, since Trousseau published his famous clinical lectures, there has been produced so simple and, at the same time, so able a description of clinical nervous forms.

Take, for instance, his guide to the prognosis of the course of cerebral hæmorrhage. "If within the first twelve or twenty-four hours after the hæmorrhage the temperature ascends and passes 40° C., death will occur very shortly; if the temperature oscillates about 39° C., and if there exists at the same time conjugate deviation of the head and eyes, or precocious contraction, it is probable that the result will be the same. If the temperature remains stationary about 39° C. for two or three days, and if an acute bedsore appears, the prognosis is the same. If, on the other hand, the temperature remains below 39° C. during the first twenty-four hours, the prognosis is favourable, much more so if it declines further during the succeeding two or three days. Maintain, however, a wise reserve during the first three or four days which follow the shock, for a second hæmorrhage may occur which will be indicated by another elevation of temperature. In aged or feeble persons, be doubtful of a slight thermometric curve, with prolongation of the coma or semi-coma. In order to be able to give a completely favourable prognosis in cerebral hæmorrhage, the coma must not be prolonged

beyond forty-eight hours, and the temperature ought to be almost normal at the end of from four to six days."

Illustrative quotations of this kind might be extended indefinitely, not only from the chapter on cerebral hæmorrhage, but from all the other sections of the book; but we consider this sufficient to exemplify the clearness of the author's teaching and the practical utility of the book. It would take too long to exemplify the author's various methods of treating different forms of nervous disease, but when it is stated that in this part of the subject he treats of prophylactic, ameliorative, and radical treatment, and that under each head he gives us a profusion of hints, some of which are so apparent that we wonder they have not been more strongly insisted upon, it will be seen that a perusal of the book is required in order to form a just appreciation of its merits. Such a perusal we heartily recommend to those interested in the subject with which the book deals.

Les Paralysies générales progressives, par le Dr. M. KLIPPEL. *L'Œuvre médico-chirurgical.* 1 brochure in 8vo. Paris: Masson et Cie., Price fr. 1·25.

This little brochure is partly a *résumé* of articles published in late years by the author, who appears to be still unaware of most of the contributions to the study of general paralysis made in this country, in consequence of which there is failure, in some respects, to give to various published materials the mention and priority which they would rightfully receive in an adequate and correct summary of the literature of the subject.

The several chapters deal respectively with; (i) encephalic lesions of the general paralyses; (ii) encephalic symptoms; (iii) diagnosis; (iv) spinal forms; (v) organs of vegetative life and great sympathetic; (vi) ætiological and pathogenic conclusions; (vii) treatment.

That general paralysis is not a simple form of disease, always alike, is so obvious that many attempts have been made to divide the field of observation, both as regards symptoms and as regards lesions. Hence attempts to describe varieties of general paralysis, also those which had as their aim the establishment of links between general paralysis and other affections, and those which led to the description of various forms of so-called pseudo-general paralysis. There have been conflicting tendencies, on the one hand, to narrow and specialise the realm of general paralysis; on the other, to widen the borders so as to include large clinical and pathological departures from the standard,—then, perhaps, collocating them under an inclusive term as the general paralyses.

This last is the line followed in the publication under notice, which makes of the limits of the progressive general paralyses a very wide net, gathering in a vast shoal of cases, which last are divided into three principal groups. These groups are—

I. Primary inflammatory general paralysis to a large extent corresponding to the so-called "classical" form of the disease as recognised by Bayle and others.

II. The secondary or associated general paralyses, namely, those secondary to, or associated with, other lesions, on which the inflammatory process (of Group I) becomes grafted; secondary forms of encephalitis being added to the preceding lesions, as a result of secondary infection.

The preceding "other" lesions may be specific luetic ones, or those of chronic alcoholism, or of atheroma of cerebral blood-vessels, or the congenital brain malformations of degenerates and of idiots, or the brain conditions of chronic insanity.

III. The degenerative general paralyses, sometimes with specific lesions. Herein the lesions are non-inflammatory, and yet producing the clinical aspects of general paralysis.

Should encephalitis supervene in any particular case of this third group, such case would thereby enter Group II.

The subject bristles with difficulties, and any reasonable attempt to solve them is to be welcomed. The inclusion of this third group is open to objection so long as the evidence for it remains insufficient. But the discussion of this aspect of the question would lead us too far afield.

Le Myxœdeme. Par le Dr. THIBIERGE. Paris: Masson et Cie., 1898. Price fr. 1·25.

Among the series of clinical monographs upon new subjects in medicine, surgery, and biology published in *L'Œuvre Medico-Chirurgical*, Dr. G. Thibierge contributes an able paper upon myxœdema. In the opening paragraphs the author sketches the history of the thyroid gland and its functions from the period of complete ignorance up to our present state of knowledge. He shows how this knowledge was obtained by patient work, accidental coincidences, and deduction from diseased conditions and artificially produced disease the result of operation. For clinical purposes he classifies the disease into—

Spontaneous myxœdema of adults; infantile myxœdema; myxœdema the result of operation; and endemic myxœdema or cretinism.

Spontaneous myxœdema of adults is treated first, being, as the author remarks, the first disorder of the functions of the thyroid to be specially recognised as a specific disease, and as such described by Gull, Ord, and Charcot. The clinical picture of the disease is fully treated, following in its details the classical description given by Sir William Gull. Reference is also made to the researches of Sir Thomas Grainger Stewart, Masoin, and others. The pathological anatomy and ætiology of myxœdema are then reviewed in full.

In section 2, the myxœdema of infancy, Dr. Thibierge shows how the disease differs from that in the adult. He points out how various

are the functions that the gland must play in development, and graphically details the deficiencies in development when the gland is absent or functionless. The pathology of this variety of the disease shows that the chief and ever-present lesions are cranio-cerebral and disease of the thyroid body. He states that the thyroid in such cases is never normal.

Under ætiology the author agrees with M. Bourneville that alcoholism and pulmonary phthisis in the parents are probably the chief factors, but he also brings forward hereditary syphilis as a cause. Cases of partial arrest of development due to failure of the function of the thyroid gland are also noted under this section.

Myxœdema, the result of operation upon the gland, forms the third section of the paper. The gradual onset of the symptoms after complete extirpation of the gland until the disease is fully developed are drawn step by step. The relation of this form of the disease to spontaneous and infantile myxœdema is also shown, accordingly as the interference with thyroid function occurs early in life, before development is complete, or after adult age is reached.

Under cretinism, in section 4, the author comments upon the fact that this form of developmental disease has long been recognised as a disease due in some way to disturbance of thyroid function. The relation between cretinism and myxœdema, however, was not appreciated until it was pointed out that apparent enlargement of the thyroid body did not necessarily imply increased function. Endemic cretinism is always associated with endemic goitre. Cretins are often, if not always, the offspring of parents who suffer from goitre. He refers to the fact that cretinism occurs chiefly in certain districts, chiefly mountainous, and often only in certain valleys of these districts. With regard to the ætiology, the theory of the deficiency of iodine in the water derived from snow is mentioned, but is not considered satisfactory by the author. He concludes by saying that cretinism occurs in all climates and in all latitudes, but is most prevalent in the Alps, both in Switzerland and France, in the Pyrénées, and in the valley d'Aoste in Italy.

The differential diagnosis between myxœdema and allied physical conditions is treated in detail.

Dr. Thibierge then gives a comparative *résumé* of the various abnormal conditions associated with disease of the thyroid gland, and also discusses the different symptoms induced in man and the lower animals after extirpation of the gland. In this connection the parathyroid bodies are also mentioned.

The monograph ends with a history of the treatment of myxœdema. The therapeutics of the present treatment are described, and the various risks run during treatment are fully detailed. The author is thoroughly of the opinion that myxœdemic patients under treatment should be under strict medical supervision.

Essai sur le Traitement Chirurgical de l'Epilepsie. Dr. P. Rellay. Paris: aux Bureaux du Progrès Médical; Felix Alcan, Boulevard St. Germain 108. Pp. 65, with several illustrations and bibliographical index. 1898. Price 3 fr.

This essay, by a pupil of Dr. Bourneville, gives interesting information with regard to cases met with in the Bicêtre, who had undergone elsewhere the operation of trepanation, otherwise designated craniectomy. The author divides epilepsy into two classes—symptomatic and essential. In the latter he contends that operative procedures ("trepanation") are of no avail. In localised epilepsy they may occasionally be of temporary advantage. Such amelioration of epilepsy, as has been observed after trepanation, does not necessarily result from a relief of cranial pressure, for temporary amendment has sometimes followed the "revulsion" after operations in other parts of the body. As regards craniectomy undertaken in cases of microcephalic idiocy, the author contends (with Bourneville) that the theory of premature synostosis is absolutely false, and that the operation has no scientific justification and no lasting beneficial effects. As in the case of trepanation for epilepsy, some temporary amelioration may occur, attributable in great measure to the care and attention received by the patient while in hospital; but the accounts of success published by surgeons at an early date after the operations refer rather to the surgical procedures than to any permanent benefit. They are not usually borne out by the subsequent history.

In the closing chapters Dr. Rellay has given detailed observations of five cases, in which either negative results or aggravations of symptoms have followed trepanation for epilepsy; and the conclusions from these, as well as from pathological appearances noted after craniectomies, are that where such an operation is undertaken the chances are that "the last state of that man is worse than the first."

De l'Epilepsie au point de vue Clinique et Médico-légal. Par le Professeur Paul Kovalevsky. Pp. 57.

This is a reprint of Professor Kovalevsky's contributions to the *Annales Médico-psychologiques* (January to June, 1898). The first half deals with an analysis of the symptoms of "grand mal," specially with a view of showing the means of detecting simulation, the author attaching some importance to such symptoms as the flexion of the thumb (which does not return to its original position, or only very slowly, after forcible extension), the inclination of the head to one side, the dilatation of the pupils, &c., during the attack. He recognises that no one symptom is pathognomonic, and that the diagnosis of epilepsy must be based on the combination of all the symptoms present. A pithy account of psychical epilepsy and the epileptic temper then follows.

Medico-legally, Kovalevsky would classify all cases of epilepsy into three categories: (1) those in which the intellectual functions are unaltered in the intervals between the attacks; (2) those in which the attacks are followed by transitory mania; (3) those in which there is a gradual falling into epileptic dementia, *i. e.* a progressive mental enfeeblement is obvious between the attacks. A varying responsibility is attached to these groups, and the author enters at length in this relation into the much debated and thorny question of partial responsibility. In accordance with his views, he would leave to the medical expert the solution of such problems as "defining in a given case the degree of intensity reached by the mental irritability which is present during the stage preceding an epileptic fit, with a view of concluding how far this irritability may have paralysed the normal activity of the mind." Moreover, as regards the responsibility of the epileptic who is gradually sinking into dementia, Kovalevsky holds that "during the lapse of time in which the intellectual faculties are passing from a perfectly healthy state into one of dementia . . . . the responsibility of the individual is in inverse proportion to the course of the disease."

The monograph concludes with a summary of cases, borrowed from various sources, in which crimes were committed during a state of psychical epilepsy. The author appears to have read much of the literature of epilepsy, and as he is a man of experience, this reprint is well worth perusal.

Psychoses primaires—Esquisses de psychiatrie Médico-legale. Par le Dr. Paul Kovalevsky. Pp. 56.

This is a reprint of Professor Kovalevsky's contributions to the *Bulletin de la Société de Médecine mentale de Belgique*, and deals almost entirely with the subject of melancholia, especially from the medico-legal standpoint. Although, according to his definition, the author looks upon primary psychoses as occurring in previously healthy individuals without hereditary predisposition to nervous and mental diseases, a certain proportion of the cases whose notes are given are far from corresponding to this description. Absence of interested or egoistic motive is especially emphasised as a characteristic of the crime of the melancholic, contra-distinguished from that of the ordinary criminal. With regard to the so-called "lucid intervals," Professor Kovalevsky would restrict this phrase to its medical signification; medico-legally he looks upon the responsibility of a melancholic, in the stage of remission or intermission between the attacks, as limited. Moreover, as melancholics tend markedly to conceal their symptoms, he enjoins great prudence in estimating the degree of their responsibility or civil capacity. While the maniac is frequently guilty of minor offences, it is rarely that he commits a crime. In his large experience, Kovalevsky says that he has only once observed a serious offence committed by a maniacal patient. A short reference is made to cases of recurrent insanity and "folie circulaire."

Handbuch der Krankenversorgung und Krankenpflege (*Handbook for the Care and Nursing of the Sick*). Erster Band. I und II Abtheilung., Berlin, 1898. Royal 8vo, pp. 758. Price 20 marks.

In these two parts we have the half of a book which, when completed, will give us a full account of all the methods of caring for and lodging those afflicted with disease or helpless through disabilities. The work is under the charge of three editors—Dr. George Liebe, Dr. Paul Jacobsohn, and Dr. George Meyer—who have employed other contributors known to be acquainted with the special subjects of which they treat. In the first part Dr. Dietrich tells us how the sick and destitute were cared for in the times of long ago. This, though perhaps not the most useful chapter, is the most interesting to the general reader. What little was done for them in ancient times was scarcely done for pity or charity. The wealthy Romans had hospitals for their rural bondsmen and city slaves, and military surgeons followed the legions; but the first hospitals for the treatment of the sick and destitute seem to have been in India and Ceylon. It was Buddhism that first recognised the common brotherhood of man. The care of the sick was from the beginning one of the first duties of pious Christians, and when their religion gained a legal footing, hospitals, xenedochia, and asylums appeared and continued down to our own day. The Mahomedans had also hospitals and asylums. He mentions a hospital in Damascus A.D. 707, one in Egypt 872, another in Bagdad about the same time, all richly endowed. There were also many in Spain, where the Mahomedans erected the first asylums for the insane in Europe.

The author gives an interesting account of the religious brotherhoods which sprang into existence during the Middle Ages. Many of the hospitals and lazar houses were more for the benefit of the healthy than the sick, since they were used more to keep apart those who had infectious diseases than to comfort or even cure them. Dr. Dietrich thinks that the secular clergy, on the whole, did not favour institutions for the sick, and managed to divert them to other uses. The Reformation in Germany made matters worse. The Reformers thought more of saving men's souls than caring for their bodies, and many of the old foundations were seized upon by the nobility or civic corporations. Those that remained were ruined by the Thirty Years War. From the present century comes a flourishing record of unselfish exertions for the benefit of those overtaken by disease, from which all classes have been gainers.

The chapter on asylums is written by Dr. Lewald. While recommending exercise and work, he assigns the first place to rest in bed as the most curative method of treatment, and claims that this was introduced by Dr. Paetz, of Altscherbitz, in 1881. He begins the treatment of every new case with rest in bed, and experience has shown that many cases of acute insanity keep quiet and remain quiet after great excitement when one affords to their brain, even when the disorder is only functional, the rest given to patients with moderate diseases. For quieting patients he recommends a prolonged bath at a temperature of from 35° to 38° C.,

the temperature raised a little towards the end. Dr. Lewald mentions that Professor Meyer, of Göttingen, has still for several years managed to do without forcible feeding. Apparently this method is not followed in any other German asylum. He gives a description of the Anstalt Dziekanka in Posen as a model asylum, and gives a plan of the buildings and grounds. What the Germans call colonies are more or less distant from the central asylum for the boarding of harmless patients, all under the medical superintendent.

In a most instructive chapter Dr. Wildermuth treats of neuropathic patients, epileptics, and idiots. He gives his views upon the cases of functional nervous diseases and the prophylaxis against the neurotic constitution, and the different methods of treatment, dietetic and hydropathic, gymnastic and electric, and gives an account of the different institutions and *Heilanstalten* which form a distinctive feature in German-speaking lands.

Dr. Wildermuth observes that the greater the freedom in which treatment is allowed to unfold itself in asylums, the better will they suit the lighter and earlier forms of mental derangement, and the less will be the prejudice which opposes the sending of patients to special institutions. This development is hindered by laws which make entry into an asylum more and more difficult. This is also true of Great Britain. Under the chimera that there is a lurking danger of sane persons being unjustly shut up, although no clear instance of wrong imprisonment has been proved, the freedom of the physicians who minister to the insane has been despotically curtailed. Every new Lunacy Bill means more shackles for the medical superintendent, more senseless returns and insulting regulations. But the welfare of those subject to mental derangement and nervous disabilities will be more promoted by encouraging all initiative, private and public, and the bestowal of skill and capital for their benefit, than by any number of new enactments, the outcome of senseless suspicions. The rest of this second part is filled up with chapters on hospitals for patients with infectious diseases, chest complaints, syphilis and leprosy, and habitual drunkards. There are also special chapters on hospitals for women's and children's diseases, eye diseases, and establishments for the blind, the deaf, and the cripple, houses for the convalescent, and infirmaries for the destitute. We regret that our space does not allow us to give special praise to these useful and able treatises.

We hope that enough has been said to show that this book has been wisely planned and is being worthily executed. When complete, it cannot fail to be a work of wide usefulness.

Part III.—Psychological Retrospect.

FRANCE.

By Dr. René Semelaigne.

Treatment of Epilepsy by Sympathectomy.—Dr. Lannois, of Lyons, relates some cases of epilepsy treated by sympathectomy. Only one was cured, a patient seventeen years of age, who had had frequent hysterical attacks and severe epileptic fits, which all disappeared after the operation of sympathectomy and stretching of the pneumogastric. Three patients improved, but they were hystero-epileptic; and Dr. Lannois' opinion is that in such cases the apparent improvement might be due to auto-suggestion or traumatic shock, &c. The condition of the majority of the patients remained stationary; in three the symptoms were aggravated, and one died.

According to Dr. Chipault, of Paris, a bilateral resection of the superior cervical ganglion of the sympathetic is quite harmless, and might prove, from the therapeutical point of view, very advantageous in cases of idiopathic epilepsy. Seventy-one operations have been performed without any subsequent accident. In these cases hygienic, moral, and medical treatment should specially be applied.

Dr. Vincent Laborde, of Paris, in a lecture to the Academy of Medicine, proved that a complete resection of the cervical sympathetic does not produce any appreciable result in cases of experimental epilepsy. Guinea-pigs had been induced to a complete state of epilepsy by a hemisection of the dorso-lumbar axis, and epileptic fits could easily be produced by an excitation of the left cervical area, or else they occurred spontaneously. Surgical intervention did not bring about any change.

Dr. Ricard, at Bicêtre, performed a resection of the superior cervical ganglion of the sympathetic on an epileptic æt. 24, after all medical means had failed. At the moment of resection no pupillary reaction or circulatory signs were observed. The patient recovered, but the operation was not successful, an attack occurring on the following night.

Dr. Maurice de Fleury, of Paris, thinking that epilepsy is often a result of digestive troubles and auto-intoxication, prefers hygienic and medical treatment to surgical—*e. g.* special diet, washing out the stomach, cardiac tonics, and injections of serum. These latter considerably help the bromides, are also diuretics, increase arterial pressure, maintain the integrity of the intellectual power, and improve the temper. In serious cases he advises phlebotomy and transfusion of artificial serum.

Transitory Delirium in Epilepsy.—Dr. Mabille, of La Rochelle, reports four cases of epilepsy with religious hallucinations and delirium; the hallucinations following the epileptic attacks, and more or less persisting. But the patients remain conscious, and are able to give a clear account of their hallucinations of sight and hearing, which seem to be

the source of a transitory mystical delirium, but which generally disappears along with the epileptic attacks.

Post-operatory Psychoses.—Dr. Rayneau, of Orléans, presented to the Congrès des Médecins Aliénistes et Neurologistes, held at Angers last August, a report on the psychical troubles which sometimes follow surgical operations. He believes that hereditary predisposition is the most important factor in such cases.

According to Dr. Régis, of Bordeaux, very few cases of post-operatory delirium last long enough to render asylum treatment necessary; hence an ordinary surgical hospital is the place for such study. He admits two great varieties of post-operatory delirium—1. Delirium in the degenerate. 2. Delirium occasioned exclusively by the surgical operation.

Such psychoses present various forms, but these forms have all a common type, viz. mental confusion. In all the cases observed, the delirium in slight cases begins at night and ceases in the morning; in severer ones it extends into the daytime, but with lucid intervals; while in the worst cases the delirium is continuous, followed by total amnesia. When the delirium appears immediately after an operation, its cause seems to be an intoxication from the anæsthetic; but if it does not appear till between the second and tenth day the cause is due to infection from the wound —a septicæmia or auto-intoxication—while if the delirium be delayed for weeks or months, it might be due to a psychical or physical asthenia, caused by prolonged decubitus, ill-nutrition, dressings, suppression of an organ the functions of which are internal, &c.

Professor Joffroy, of Paris, compares post-operatory troubles to hystero-traumatic palsies, in which are observed motor signs following traumatism, and which only appear amongst the hysterical. The origin seems to be a shock in the nervous system occurring amongst patients partly hysterical and partly degenerated. One explanation is the part played by the pre-occupation of the patient's mind—"rumination intellectuelle." In a case of hystero-traumatic palsy this "rumination intellectuelle" only begins from the accident, whereas in a case of post-operatory delirium it acts adversely from the moment that an operation is contemplated, thus running through the whole period both before and after the operation. Another proof of this is that such troubles are never observed in children, but only in adults, for the former are ignorant of the fact that they are to undergo an operation; and even if they are told, they do not realise its importance or seriousness.

Dr. Joffroy also states that there is a similar connection between the post-operatory psychoses from infection and puerperal insanity, the infectious agent being the same; and though it is more common amongst the latter, this is due to their greater degree of receptivity from the increased nutritive changes occurring during pregnancy. The pathogeny of post-operatory psychoses is most complex, the "rumination intellectuelle" not being the only cause, others probably being infection, septicæmia, auto-intoxication, &c. However, notwithstanding their complexity, these psychoses do not occur without a special predisposition.

Dr. Granjux, of Paris, an army medical officer, has not observed any such psychoses among soldiers—at least during peace—but this immunity is probably due to a special selection of soldiers, which eliminates

predisposition. This argument favours predisposition as the important cause, and also the view that the traumatic shock does not play an important part receives support from the fact that no case occurred amongst the soldiers at the battle of Freschviller, even though those wounded suffered much discomfort for eight days.

Dr. Picqué, surgeon to the Hospital of Paris and Asylums of the Seine, has observed some of these cases; not many, however, for we have to separate those who are true lunatics, but on whom an operation has to be performed; and, on the other hand, those whose delirium came on after the operation. These latter have hereditary predisposition, and their condition is either one of excitement or depression, the first variety being not always easily separated from some hysterical forms; but the second is always recognised as the true type of post-operatory psychoses, and it occurs soon after the operation (some days, weeks, or months), and often disappears without any appreciable reason or under the influence of a proper moral treatment. This variety must be carefully separated from the delirium by intoxication—meaning by this only septicæmic or pharmaceutical intoxication—as this delirium is only a secondary symptom. The state of the different viscera is of greater importance, but in genuine psychoses the delirium constitutes the whole illness. A post-operatory psychosis is cured without any treatment, and only requires admission to an asylum, but an alleged psychosis issuing from intoxication requires surgical treatment.

Transitory States of Delirium.—Dr. Charles Vallon gave a lecture on this subject, and gave as their generic characters an abrupt beginning, with rapid rise and fall, and an equally abrupt ending. They are accompanied by great disturbances of consciousness, loss of memory, excitement, and by abnormal impulses and dangerous reactions. From the pathogenic point of view one may consider—(1) Sudden variations in the pressure and distribution of the blood, following a vascular palsy or cramp (transitory mania) and transitory states of anguish (pathological emotions); (2) sudden and deep disturbances in the nutrition of the psychical organ, occasioned by qualitative changes in the blood, *e. g.* its mixture with various substances, or an overloading from excremental matters, or an insufficiency of some of its normal elements (toxical delirium, delirium of inanition).

Dr. Charpentier, of Paris, thinks that besides the delirium symptomatic of epilepsy, alcoholism, or degeneration, one must admit idiopathic transitory delirium. Every emotion and every passion is able to produce a transitory delirium without hereditary or acquired mental degeneration, traumatism, or appreciable illness.

Dr. Gilbert Ballet does not know a single case of transitory delirium affecting normal people.

Dr. Motet in his whole career never observed a single case of transitory delirium which could not be referred to epilepsy, alcoholism, traumatic, or pathological lesions of the brain.

GERMANY.

By Dr. J. Bresler.

The last year has borne some good fruit for our speciality. After all the hostility and all the calumnies which German alienists have had to endure from all sides in recent times, and which no repulse or refutation seemed to check, their services have at last received an acknowledgment from an authoritative quarter, and from a person whose experience cannot be controverted in lunacy matters. The 30th of March, 1898, on which Count Posadowsky broke a lance in defence of our speciality in the German Parliament, should be a memorable day in the chronicles of psychiatry in the empire. A member, Dr. Kruse, asked the Secretary whether the Government were aware of any facts in proof of the charges which had been uttered in Parliament against the administration of the asylums. Posadowsky replied: "No facts have come to the knowledge of the Imperial Chancellor showing that the accusations made in this honourable house against a large body of physicians are justified, and I am glad to have this opportunity of bearing testimony in favour of this section of the medical profession. In my former official capacity (as Lord-lieutenant of the province of Posen) I often came into close contact with physicians practising in this speciality who were attached to the asylums in my department. I have become acquainted with the greater number of the asylums throughout the various portions of Germany, and have come to know a great number of alienists. I can only say that these men devote themselves to their duties in the highest spirit of self-sacrifice and amidst difficulties which can hardly be conceived. He who from his own knowledge never learned the working of a great asylum and experienced the difficult task which the alienist has in such a situation, can scarcely fancy how large a measure is needed of self-command, of self-devotion, of self-renunciation; or what a measure of love of one's kind if a man is to faithfully fulfil such an employment. When it has been said here in the open meeting of this house, that the alienist is often 'nervous,' he who understands these officers' lives can hardly wonder if that condition should arise as a consequence of their work. The man who has studied the literature of lunacy, or has scientifically explored that subject, must know that all the improvements which have been effected in the treatment of lunacy have been effected, not through pressure from the laity, but in consequence of the humane sentiments of alienists. To alienists are due all the humane modern improvements in practical psychiatry, such as the treatment of lunatics as sick persons (patients) and not as criminals, as persons suffering from a somatic affection and not merely as individuals to be shut up in barracks; the system of family care (boarding out); and the method of giving all patients the utmost possible personal liberty, and of only isolating them from other patients in transitory conditions of irritation. It is incontestable that in an asylum containing 600 or even 1000 lunatics and a great staff of attendants, persons usually of the uncultivated class, acts of violence and roughness must occasionally take place. But the alienist cannot be

responsible for these. He can only be blamed when the offending official is not subjected to disciplinary punishment, such as summary dismissal. I am in a position to say, from my own experience, that alienists are men devoted to humane ideas, and that sometimes their opinion of the claims of humanity in the treatment of the insane go so far that a layman feels that perhaps the safety of the other patients or of the staff may be thus endangered. I am glad that Dr. Kruse has touched upon this matter so that I can testify in favour of this very honourable branch of the medical profession."

A friendly report has been presented to the Saxon Parliament by a committee appointed on a motion for the Improvement of the Lunacy Law. After a very long statement come these words:—"From all this it is evident that in Saxony the care of the insane in asylums is provided for in the most minute detail. There is an entire absence of the least evidence to justify the charges of illegal detention, of recovery followed by several years' prolongation of confinement, and so forth, which have caused public alarm."

Some time later, when the accusations brought against a private asylum in the Saxon Parliament had been proved to be pure inventions, the minister, von Metzsch, took occasion to say that he felt compelled to state that the Government had every reason to be satisfied with the work done by the asylum physicians, who have to carry out the most difficult task that can be imagined.

From various quarters in the course of the past year, announcement was made of the establishment of new and the enlargement of old asylums. A new asylum is about to be built in the Grand Duchy of Mecklenberg-Strehlitz, for 180 patients, at a cost of £36,000. Bremen is also building a new asylum on a property of 267 acres. A psychiatric clinic is being built at Kiel, and the clinic at Halle a. S. is being enlarged. In Saxony a new asylum is being built at Löbau for 600 patients, costing £160,900, and an asylum for epileptics at Hochweitzschen. Pomerania is building a new asylum at Treptow; in Berlin a third asylum is under consideration.

The principal prisons continue the work of providing wards for criminals who become insane.

In Saxony and Westphalia the salaries of the attendants have been increased.

The Prussian Government continues to enforce psychiatric instruction for public medical officers.

Scientific psychiatry in the year 1898 ran along the usual lines, taking no new direction. No important influence was exercised upon practical lunacy work.

The *study of the nerve cell* remained the focus of the endeavours of investigators. A report of the result of these studies (as well as of their own investigations) is given by Goldscheider and Flatau in their book, *Normal and Pathological Anatomy of the Nerve Cell*, Berlin, 1898.

Mention should not be omitted of a very important literary effort produced during the last year, the *Annual Report of Neurology and Psychiatry*, edited by Mendel, Jacobson, and Flatau, containing a complete review of these branches. The first volume, reviewing 1897, contains about 1500 pages, the second, for 1898, is in course of preparation.

The lamented loss of two eminent alienists is to be recorded, Dr. Jean Paul Hasse, Director of the Brunswick Asylum at Königslutter, who died on the 6th of February, 1898, and Dr. Ferdinand Wahrendorff, who died on the 21st of March, 1898. Hasse was Director of the Königslutter Asylum from the time of its establishment in 1865 until 1896. The success of the institution was the task of his life, and he fulfilled it. Wahrendorff was the founder and the director of a private asylum at Ilten, where he was the first in Germany to establish and carry out the system of domestic care (boarding out).

BELGIAN RETROSPECT.

By Dr. Jules Morel.

Psychical Hallucinations, by Professor X. Francotte. While Baillarger believed that in psychical hallucinations the patient thought that his communications come from outside of himself, but without any palpable medium, and Léghes that they are verbal psycho-motor hallucinations, Dr. Francotte believes that they are really delirious interpretations. In any hallucinations there are two elements; the real hallucinatory element being an image with all the characters of an external one, and the delirious element being composed of the external parts of the hallucinatory image. This second element is absent in the usual hallucinations. Now in the phenomena of the psychical hallucination nothing proves the existence of the hallucinatory element; the delirious element, the false interpretation only exists. There is an analogy between the phenomenon in which the subject pretends that movements, words, or thoughts are imposed from outside, and the phenomenon in which the patient pretends that he is hindered in his movements, words, or thoughts. In these latter there is only a delirious interpretation. Dr. Francotte mentions a case which had no alsely interpreted verbal psycho-motor phenomenon, proving thereby that only a psychical hallucination of a real verbal nature was present. In psychical visions, according to Francotte, the patient thinks he sees more or less distinctly one or more objects external to him; consequently this is a delirious interpretation. In the category of delirious interpretations there can be included a class of "objectivation or delirious exteriorisation of internal phenomena," which can be divided into two groups: first, delirious objectivation of physiological phenomena, as, for instance, in the case in which menstruation was abolished for six months by the influence of her persecutors; second, delirious objectivation of psychical phenomena, which (as images, ideas) are falsely imputed to an external influence. It is to this group that psychical hallucinations belong.

Injection of Artificial Serum in the Insane, by Dr. De Boeck. Every alienist knows how difficult it is to feed the sitiophobic insane. Dr. de Boeck recommends, on physiological grounds, the injection of a solution of chloride of sodium. These operations are simple, and there

is no danger if asepsis be observed, all that is required being an india-rubber tube, a trocar, and hot compresses. The patient lies on his face, and after the buttock and thigh have been well washed, the trocar, to which is attached the tube, is plunged into the muscles. The solution, which should be of a temperature between 37 and 40° C., and about a litre in quantity, runs slowly into the tissues. If œdema occurs another spot must be chosen. In one case 200 grammes of the solution were injected in the morning and 300 in the afternoon, with the result that two days after the first injection the patient fed herself, became calmer after her former excitement, and slept well. In another case—melancholia with sitiophobia and extreme weakness—life was prolonged for one month, and at the post-mortem it was found that the viscera had lost very little in weight, which shows that these injections stimulate the patient, and keep up his health. Physiologically this opinion seems right. Water is the most important of all foods, and without it the animal dies as promptly as in general inanition. Water dissolves mineral matters and soluble organic compounds, also oxygen and carbonic acid; it contributes to their distribution, moistens the tissues, and gives them their consistency. It regulates the animal heat by the cutaneous and pulmonary evaporation, and the body loses every day from the renal, cutaneous, intestinal, and pulmonary surfaces between 2500 and 3000 grammes. Abundant water given to the patient allows him to utilise the alimentary reserves and to eliminate the waste of the body, and we know now how toxic these are.

Pathology and Prognosis of Delirium Tremens, by Dr. VILLERS. The author compares the observations of Dr. Jacobson, of Copenhagen, and those of his own made at the St John's Hospital in Brussels.

1. Both authors agree regarding the quantity of alcohol necessary to produce the delirium, viz. half a pint a day. All the patients were chronic alcoholics, and only five or six drank beer, the rest spirits only. The ages of fifty patients varied from thirty-six to ninety. Dr. Jacobson believes that there is a relationship between the delirium and the pneumonia, but this is not accepted by Dr. Villers.

2. As regards the causes, there is a great difference. In 100 cases of Dr. Villers there were seventeen with complications (two traumatic, one arthritic knee-joint, eight cardiac diseases, two pulmonary tuberculosis, and four pneumonias). Of the last four one was cured at the beginning of the delirium, two had fever, and the fourth was a broncho-pneumonia without fever. Dr. Villers, in opposition to Dr. Jacobson, could not find any relationship between the delirium and pneumonia, so consequently the pneumococcus, or rather its toxin, could not be a cause common to both.

3. Even the fever does not establish any relationship between the two, as it is not present in every case.

4. Of Dr. Villers' cases 16 per cent. had albuminuria as against 60 per cent. of Dr. Jacobson's. In all it was temporary, but if it had been permanent it would have been due to renal disease.

5. Out of the 124 cases of Jacobson 119 lost weight, between 100 and 6500 grammes. Of these, 49 cases lost between 100 and 1000 grammes, 34 between 1000 and 2000, while 16 between 2000 and 3000

grammes. Dr. Villers refers not to the loss of weight but to the amount of sleep; 26 cases sleeping after the second day, 39 after the third, 22 after the fourth, and 10 after the fifth day.

6. The greatest difference between the statistics of Copenhagen and Brussels is found in the death rate; Dr. Jacobson having a percentage of 13·4 and Dr. Villers only 1·5 per cent.

In conclusion, delirium tremens is much milder, has fewer complications, and is of less importance in Brussels. The duration of the disease is shorter, and the death rate nearly ten times less. Dr. Villers tries to explain it, not by the ethnic factor, although some forms of insanity are very different in different people, not also by the quantity of alcohol drunk, as it seems the same, but by the somatic condition of the drinker at the time of the onset of the delirium, *e. g.* the Germans who have drunk beer from their youth will probably have an enlarged stomach, fatty heart, and diseased kidneys, and will therefore get a prompt attack of delirium whenever they take even moderate quantities of strong alcohol as spirits.

The *Question of Contagion, due to the Presence of Epileptic Children in Asylums for Weak-minded Children.* This was brought up for discussion before the Society of Mental Medicine by the Minister of Justice, and the conclusions were: that the presence of such is disadvantageous both as regards contagion and education; idiots, whether epileptic or not, if their education is hopeless, should be sent to colonies; idiots with rudimentary intelligence, but capable of improvement, ought to be sent to colonies where very elementary schools should be built for them, from which should be banished those with epilepsy. In no case should idiots be received in ordinary schools, but should have special institutions, and for convulsive idiots Government should organise schools.

The *Analgesic Sense in the Three Periods of General Paralysis*, by Dr. Marandon de Montyel, in the *Archives of Neurology*. The author has studied the tactile sense in 108 cases of general paralysis, and the same cases were utilised for the study of the analgesic sense. The following are his conclusions.

1. The analgesic sense could be obtained in 95 per cent., even in the last period. The experiments were unsuccessful in four cases in the first stage, in five in the second, and only three in the last.

2. In 65·6 per cent. some difficulty was experienced in the experiments.

3. The alterations were always simple: exaggeration, weakening, abolition, and delay. In cases without any complications it was never completely absent.

4. In these last cases the alterations were general, never local.

5. The rarest kind of alterations was delay, 1·8 per cent., the most frequent diminution 42 per cent., and between these two come abolition 14 per cent., and exaggeration 9·4 per cent.

6. In the diminution and exaggeration different degrees were noticed, viz. light, moderate, marked, and this much more in the former.

7. Analgesia, which is altered in the first stage, has in the second a tendency to become normal again, but in the third to again alter.

8. Delay of this sense was only noticed in the first stage. Exaggera-

tion on one side and abolition on the other have developed in a contrary direction, the first having a minimum of frequency at the third stage, this stage being the maximum of the second. However, the differences were not much marked, and in every stage have been found exaggeration, diminution, and abolition.

9. During remissions, even when pronounced, analgesia was found in 65 per cent., and the alteration was always diminution.

10. In the excited demented form the analgesia is more altered than in the quiet form. In the expansive, depressed, and mixed states, the variety without excitement was the best.

11. The analgesia is most often altered in the expansive form, but least altered in the mixed form; while between these two, and equally frequent, come the depressed and demented forms.

12. Exaggerated sensibility to pain was only totally absent in remissions; and of the four forms it was most marked in the expansive, rare in the demented, the other two forms occupying an intermediate position. It was also more often found in excited than in calm states, except in the mixed form.

The two other varieties, viz. diminution and abolition, were just the reverse of the above as regards their relative frequency.

13. There are no well-defined relations between the analgesic states and the transformations of the physical personality, the genital delirious ideas, the subjective sensations in the skin, the desires for undressing, or the motor symptoms in the two first stages.

14. Only in 40 per cent. of the cases were the tactile and analgesic senses normal and abnormal at the same time; consequently dissociations of the two senses were the most frequent. But very often we have noticed this one normal and that one abnormal. When there was simultaneous alteration of the two senses, one was never different from the other; both always being simultaneously either exaggerated, diminished, or abolished. Finally, the most frequent alterations of the analgesic with the normal tactile sense were diminution, abolition, or exaggeration, and nearly always in equal proportions.

15. When alcohol and traumatism could be invoked as a cause, there was most frequently a nearly equal alteration of the analgesic sense; but with syphilis and other causes, also with a mixture of syphilis and alcohol, there were a large and equal proportion of alterations.

16. The above statements prove the greater frequency when alcohol is the cause than when alcohol and syphilis are associated. For syphilis alone, traumatism, and other causes, the differences are too feeble to make clear distinctions.

17. One alteration should be a great help in the early diagnosis of general paralysis, viz. the transitory analgesia preceding the motor troubles, as mentioned by Dr. de Crozant, but this symptom cannot be noticed in asylums.

18. Finally, it is proved that the state of the analgesic sense at the initial stage is of no help for the prognosis of the evolution of general paralysis.

Classification of Mental Diseases, by Prof. FRANCOTTE, who thinks that the classification adopted at the International Congress at Paris in 1889

should undergo some modification, owing to the advance in psychiatry, and has presented to the Society of Mental Medicine of Belgium the following classification, which was adopted :—

I. Folies simples	Mania.
	Melancholia.
	Delirium with hallucinations, general. Delirium, mental confusion.
	Paranoia.
	Recurrent insanity.
	Dementia.
II. Folies névrosiques	Epileptic and hysterical insanities, chorea.
	Neurasthenic insanity.
III. Folietoxique et infectieuse	Alcoholic, morphic, and cocaine insanities.
	Insanity fixed on another.
	Infectious insanity.
IV. Organic insanities	General paralysis.
	Cerebral syphilis.
	Cerebral tumours ; brain weakening.
V. Degenerative insanities	Moral.
	Degenerative insanity.
	Simple mental degeneracy ; unharmoniousness.
	Want of equilibrium.
VI. Arrest of psychical development	Psychical insufficiency and weakness.
	Imbecility ; idiotcy.
VII. Other not specified forms.	

Treatment of Epilepsy by Adonis vernalis, combined with Bromides, by Dr. Spinhayer. From the idea that epileptic fits are accompanied with intra-cerebral hyperæmia, *Adonis vernalis* seems indicated to counteract this symptom, and in order to diminish the excitability of the brain, especially of the cortex, bromides were added. Codeine was added when there was irritability of the brain and depression of spirits. The results were the same as those obtained by Professor Bechterew, who recommends the substitution of digitalis when Adonis is not tolerated. Dr. Spinhayer was successful in the use of this combination when there was gastric intolerance, or when the patients disliked the bitter taste of the *Adonis vernalis*. The author explains the action of the medicine thus : First, it regulates the circulation ; second, it has a diuretic action, and epilepsy may depend on toxins in the blood ; third, being a heart tonic it has also a vaso-motor action, Bechterew having proved that epileptic fits are accompanied by vaso-dilatation in the brain.

Reform for the Aid of the Insane. Lecture by Dr. Peeters. This is a plea for the colonisation of the insane, which, as the readers of the Journal already know, has the sympathy of the medical director of the colony of Gheel.

General Paresis from a Medico-legal Point of View, by Professor Kovalewsky, of St. Petersburg. The author gives a description of the prodromal period of this disease, followed by the hypochondriac and

hypomaniac periods, and also by the maniacal period. Then he describes the pseudoparesis of alcoholics. The first chapter is too long, and the second rudimentary. A very slight part is occupied by the medico-legal question, and it is divided thus: the examination of the paretic during life; during his periods of lucidity; and lastly, a criticism of his deeds before death.

Remarks upon the prodromal period.—This period, varying from one to three years, presents some difficulties; most of its symptoms resemble those of neurasthenia and moral insanity, but these are insufficient to decide irresponsibility. Three points have to be considered:

1st. The presence of the symptoms of paresis.

2nd. The deeds proving that the incriminating acts have or have not been perpetrated during the prodromic stage.

3rd. The precise way in which these acts have been perpetrated, and all the concomitant circumstances, showing thereby whether the patient was responsible at the moment or not. As regards the symptoms of disease which prove irresponsibility, great caution is needed, and each case has to be considered on its own merits. First of all we have to know the state of health of the person; if it is proved that the deed took place during a perfect state of calmness in the midst of the usual circumstances of life he is responsible, but if it took place in a moment of excitement or thoughtlessness, the act is pathological. Kovalewski admits a limited responsibility for all deeds committed when the affective state is abnormal. Even though consciousness and understanding exist, and the person's mind remains lucid, yet the accused may be well on in the prodromal stage, and his responsibility is to be considered limited, for the nervous system has been for some time in an abnormal state of nutrition.

When the nervous system is affected by the toxin, the elements are not at first destroyed, and the patient continues to act like other persons, but mechanically and from acquired customs, a greater change taking place soon afterwards.

When an examination is made during the first period, every symptom of the disease may be overlooked; but great caution is needed, as other nervous diseases sometimes resemble those of this period.

The chief causes of crime and unusual deeds in this period are of two sorts: first, those due to affective abnormality (irritability, passion, sexual impulses, &c.), the acts being simple reflexes provoked by these states; secondly, due to defective reasoning and delusions, the acts being illogical and false deductions, as exaggerated schemes and impossible undertakings. The patient does not understand his mistakes and want of logic, which proves that there is a lesion of thought or organic change in his own person.

The period of full evolution of the disease.—There is no need to discuss the question of responsibility at this period, as the symptoms are evident, and none of the acts of the patient have a legal value. The symptoms are very seldom those of an affective type.

Lucid intervals.—Crimes are rare during these intervals, but they may happen. Physicians are often consulted about the civil rights of the patient. These intervals prove only a remission and not a recovery,

as several symptoms still exist, *e.g.* irritability, tremors of the hands, contractions of the face, inequality of pupils, slow ideation, weak memory, and congestion of the brain.

Kovalewsky believes in recovery from the disease, but there always remains some weak-mindedness, even though the patients have memory, reasoning power, and thinking, but still they ought to be declared responsible, and enjoy their civil rights.

Summary after the death of the patient.—Notice should be taken of all objective facts, and also the opinion of those who had known the patient for years, and who also saw him in his last moments. This would then be a complete psychological analysis.

HOLLAND.

By Dr. F. M. Cowan.

The Report of the Inspectors in Lunacy for the years 1894, 1895, and 1896, was issued in the beginning of 1898. It contains a great deal of interesting matter and important figures, along with a vast amount of dry detail.

In 1894 there were 1908 (995 males and 913 females) admissions into the different asylums. Of these 162 (89 males and 73 females) died, 165 (102 males and 63 females) were discharged not recovered, whilst 245 (124 males and 121 females) were discharged recovered.

In 1895 there was a further mortality of these patients of 145 (85 males and 60 females), 142 (70 males and 72 females) discharged not recovered; there were 228 recoveries (102 males and 126 females).

In 1896, 67 died (35 males, 32 females), 50 left not recovered (22 males, 28 females), 36 recovered (20 males, 16 females).

In 1895 there were 1920 admissions (998 males, 922 females); in the same year there were 161 deceases (91 males and 70 females); 145 non-recoveries (88 males, 57 females); 266 recoveries (136 males, 130 females).

In 1896, of these patients 124 (63 males, 61 females) died; 143 left the asylums unrecovered (76 males, 65 females); 210 recoveries (94 males, 116 females).

In 1896, 998 males and 950 females were admitted; 175 (101 males and 74 females) died; 216 were discharged not recovered (119 males, 97 females); and 296 recovered (140 males, 156 females).

The number of insane under care in the asylums in the Netherlands on the 1st of January, 1897, was 7319 (3682 males, 3637 females); 1605 persons of unsound mind were resident in private care.

There were seven suicides in 1894, six in 1895, and only two in 1896.

It is a wearisome task to report the same annual complaints about want of room. In fact, hardly has a new asylum been built when there

is a rush into it and the authorities are obliged to refuse to receive more patients.

A new asylum for quiet demented patients has been opened at Graze, and it is hoped that this may be the nucleus of an insane colony. Indeed, if the asylums could get rid of these inoffensive patients a great deal of room might be obtained for recent cases. If the experiment succeeds, and I think that it must succeed, it will take a long time to accustom the people in and about Grave to live with the insane. A colony like the one at Gheel cannot be had to order. During the first years of its establishment constant and regular supervision is especially necessary.

Scientific attention is now being paid to prisoners, amongst whom, as is widely recognised, several are found whose proper place is an asylum. It is a well-known saying of Tarde that the reason why one man should be in jail while another is in an asylum is that the path of the former was crossed by a judge whilst that of the latter was crossed by a physician.

During the years 1894, 1895, and 1896 the inspectors met with 169 lunatics in the different prisons; of these, 26 were treated in prison, 137 were sent to asylums, and 6 were sent back to prison after having been found malingerers.

It is very unfortunate that a criminal, whose mental health is doubtful, has to be medically examined in a prison. The law does not allow of his temporary admission into an asylum; the investigation consequently has to be carried on under very unfavourable circumstances, and the reports of turnkeys may be safely said to be worthless. These officials consider medical interference as an act of usurpation, although they have never learnt to observe an insane person. A step in the right direction might be taken by employing an experienced mental nurse to attend and report upon the person to be examined. A great deal of prejudice and opposition has to be conquered before a real advance can be made.

Another matter which has been fiercely discussed is the rights of woman. I mention the question, not because it is directly connected with mental medicine, but because alienists in Holland have been actively engaged on both sides.

DENMARK.

By Dr. A. Friis.

There has been a change at the *personnel* at the asylum at Aarhus. Dr. Holm, who has been Director since 1878, having retired at the end of last year on account of ill-health, and Dr. K. Pontoppidan having succeeded him in March, 1898. This able and talented physician had been medical superintendent of the wards for nervous and mental diseases at the Kommune Hospital at Copenhagen, and clinical lecturer on psychiatry at the university there, but had resigned those

offices, sick and tired of the persecution to which he was subjected in the press, and through pamphlets at the instigation of a litigious and ill-conditioned patient who had been under his care, and who, plotting with other of his former patients, endeavoured to secure his conviction on a charge of having wrongfully detained them. Of this charge he was, of course, honourably acquitted. His retirement from his Copenhagen appointments was a matter of regret to all his colleagues and pupils, who presented him with several addresses expressive of their feelings. It is still to be hoped, and it is earnestly expected, that he will continue to adorn Danish medical literature with the results of his keen observation and intelligence, expressed with that literary polish which characterises his writings. At Copenhagen Dr. Pontoppidan has been succeeded by Dr. Friedenreich, physician to the Copenhagen prisons.

With reference to the care of idiots, the year 1898 has witnessed the adoption of the law mentioned in my last retrospect, by which the Keller asylums are to be amalgamated and rebuilt on a new site near the town of Veile in the province of Jylland, where a property of about 270 acres has been bought for the purpose. Room will thus be made for 200 idiots more, the total accommodation being raised to about 1400.

A small asylum for epileptics has been started by private initiative. It has accommodation for twenty-five quiet male patients. In the forthcoming year it is intended to start a school for epileptic children who are not mentally affected, which will be connected with a "deacon institution."

On the Toxicity of Urine, especially in Insane Patients: an Experimental Study, is the title of a very voluminous work written by Dr. V. Christiansen as a thesis for doctorate at Copenhagen University. Unfortunately the results are not proportionate to the author's labours. The book is also difficult to read and hard to get a comprehensive view of, owing to the many numerical tables and tabulated statements of experiments which are introduced into the text. The author has imitated the methods of Bouchard and his pupils, who have written on the toxicity of the urine under different conditions. He criticises the results of these authors, pointing out their weak points and deficiencies, but, as hinted above, his own results do not seem more valuable or more assured. The researches were made in the St. Hans Hospital at Roeskilde, and involved more than 500 experiments on rabbits, injected with urine from patients in mental conditions which varied exceedingly, both ætiologically and symptomatologically. General paralysis, however, and typical paranoia were excluded on account of the peculiar positions which these forms hold in psycho-pathology. The principal result the author believes he has attained is to show that in all psychopathic conditions, notwithstanding their various clinical appearances and ætiology, the quantity of toxines secreted in the urine in twenty-four hours is less than in the normal conditions (the "urotoxic co-efficient" of normal urine being 0·32 to 0·49, of the urine of the insane about 0·2). No conclusion can be drawn from the intoxication of animals by urine as to the psychical condition of the patients. The author more especially remarks the oncome of convulsions in no way depends on a greater or lesser degree

of exaltation, but that they may set in even very violently in connection with cases resembling stupor. The symptoms of urinary intoxication depend, within rather wide limits, on the individuality of the animal experimented upon.

The author has also specially examined the urine of sleepless patients, and has found that the amount of "urotoxines" secreted in the urine of the night are independent of sleeping or not. Another special investigation is on the toxicity of urine of patients on thyroid treatment. It is found that the quantity of toxines secreted in twenty-four hours during, and a short time after, treatment, is greater than the amount secreted when not under thyroid treatment. The increment is not equal in all patients, and seems to be due to an increased destruction of the albuminates.

Influenza as a Cause of Insanity; Historical and Clinical Researches, by Dr. H. Fehr, is also a very voluminous book (438 pages), written for the same purpose as the former. The results also are not very great, being mostly negative; they are, besides, not always unimpeachable, as the author admits. The historical part comes first, and the first chapter consists of a short account of the acute febrile diseases as causes of insanity; then follows a chapter on influenza in general, and then the mental diseases caused by influenza. First, the older observations are recounted, and then observations from the epidemics subsequent to 1889. Among the latter 303 cases are reviewed, published in the most various periodicals by more than 100 authors. It is evident that these authors do not agree as to the pathogenesis of these insanities. Some of them regard influenza as an "epidemic nervous disease," a "centro-neural fever." To these the psychical disturbances are a matter of course. Other authors believe that influenza is capable of producing insanity in previously sound persons, and that this process is to be explained by a special "grippe-toxine." Again, others hold that the toxine is the chief factor, but that it cannot act alone, and that there must be individual neuropathic disposition. All forms of mental diseases are also represented among these cases.

The author then proceeds to that which should be the substance of the book, his own original researches, based on fifty-four cases from the asylum at Middelfart, which are all referred to in detail. In fifty of these cases the insanity appeared as a "convalescence-psychosis" after influenza. The "infection-psychosis," which appeared as an "achme-delirium, and as "collapse-delirium" was only represented by two patients, one under each form. In two further cases the common symptoms of influenza were not confirmed in the patients themselves, but their insanity broke out at a time when everyone about them was suffering from influenza, and the author therefore thinks that the mental trouble in these cases resulted from influenza, but he does not include them in his statistics. The author's patients have shown very different symptoms; nevertheless the excited forms predominated among the cases of "infection-psychosis," and the depressive forms among the cases of "convalescence-psychosis," from which it appears to be demonstrated that influenza does not produce a special form of mental disease, and does not always produce the same form of disease. The author is of opinion that "influenza has the power of

bringing to light whatever morbid tendencies there may be in the organism, and, with regard to mental diseases, that peculiar form of insanity to which the individual is most disposed is that which influenza calls forth." However, predisposition is not absolutely necessary. The name "influenza-psychosis" is therefore not applicable, except, perhaps, as a mere ætiological definition, and the so-called "pseudo-influenza-psychosis" has for the same reason no right to its name. Of all cases of influenza, those which are most serious generally are most prone to produce insanity. Insanity may break out at any period of the illness, but most of the published cases are "convalescence-psychoses." Patients under fifteen seem relatively less affected; from fifteen to sixty-five cases are more frequent; after sixty-five the proportion again decreases. The sexes were affected in equal proportions. As to prognosis, there is nothing definite to say; the treatment is chiefly supporting. Some authors having believed that they observed an augmentation of the cases of suicide and delirum tremens in connection with epidemics of influenza, the author has made statistical inquiries into this matter, and has found that, while there has not been an absolute increase of the number of suicides during the whole period since the epidemics began, there have been during the epidemics (great as well as small) more suicides than the average expectation would justify. But there is this singular difference in this matter between the great and the small epidemics, that the apparent increase is to be traced to the two first months after the cessation of the great epidemics, but it is abolished directly after the small, and in the latter case the cessation of the epidemic is followed for the next two months by a compensatory falling off of the number. A similar falling off after the great epidemic shows itself first in the third or fourth month. As to cases of delirium tremens, a generally similar result is to be noted, but the falling off occurs even before the epidemic has ceased.

Clinical Lectures on Nervous Diseases, by Dr. K. Pontoppidan, appeared shortly after the author's resignation above referred to. In twelve lectures he treats, with his usual brilliancy, clearness, and preciseness, various subjects connected with the pathology of the nervous system. The book is of interest to the alienist, as it frequently touches upon the connections between psychiatry and neurology. Thus, in the first lecture the author describes an old man in whom multiple softenings in the brain caused by arterio-sclerosis produced dementia and hemianopsia duplex. Similarly in the twelfth lecture on "Hypochondria and the Psychical Treatment of Functional Neurosis," where the author details cases of hypochondriasis, especially one in which there were stereotypic automatic movements of the mouth to clean imaginary dirt from the teeth, the author takes occasion to thoroughly discuss the question of "disciplinary" treatment in hospitals, "diverting" by work, hypnotism and hypnotic suggestion, &c. In other lectures he deals with meningitis in adults, cerebral apoplexy, the diagnosis between organic and functional nervous diseases, cancer of the spinal column with medullary trouble, rare nervous affections in connection with the puerperal state, bulbar paralysis with emotional incontinence (Crichton Browne), humour ad ponhem, and traumatic lesions of the brain.

On the Pathogenesis of Delirium Tremens is the title of a study by Dr. P. Hertz published in the *Hospitalstidende* in consequence of the paper on the same subject by Dr. Jacobson, referred to in my last retrospect. The results of Dr. Hertz's researches is to show that uncomplicated delirium tremens is always accompanied by a disturbance of the renal functions—an acute nephritis which is primary to the delirium. There is, therefore, every reason to suppose that this malady is an acute auto-intoxicational insanity following the insufficient performance of the renal functions in an acute nephritis. The special form of delirium tremens is only due to its arising in a chronic alcoholist.

Dr. Würtzen has published in the *Nordiskt-mediciniskt Archiv* some investigations on *Insanity in Danish Recruits*. They are based on forty cases observed during the last ten years. Predisposition was found in thirty cases, and insanity appeared shortly after the beginning of service, owing apparently to a lessened power of resistance in the individual. The author is not disposed to believe in a special insanity of recruits, but thinks that most of the cases are insanities of development or of puberty.

ITALY.

By Professor Bianchi.

Italy has not yet a Lunacy Act. The various propositions submitted to Parliament have borne no fruit, owing to the fall of ministers or to the dissolution of the Chamber of Deputies. An Act is much required. New propositions, drawn up by an extra-parliamentary commission, of which the present reporter is a member, are to be considered. In the meantime insanity increases greatly in Italy. Districts, which at present are without asylums, in the modern signification, are being provided with them.

Psychiatry in Italy is at present less occupied with experimental investigation than with histological, clinico-chemical, and bacteriological work.

The principal work recently accomplished may be briefly referred to.

On the Origin and the Mutual Relationships of the Nerve and Neuroglial Elements, by F. Capobianco and O. Fragnito.—The authors give the results of their researches under four headings. Under the first they treat of the neuroglia, to which, contrary to the almost unanimous opinion of recent observers, they assign a double origin, ectodermal and mesodermal. The former is generally admitted, but not the latter. The second chapter, dealing with the origin of the nerve-cells, is of less importance, the authors simply confirming the demonstrations of previous workers in respect to the ectodermal origin of these cells. Their development is followed through the four principal stages—germinative cells, transitional cells, neuroblasts, nerve-cells.

The third chapter deals with the origin of the nerve-fibres, in regard to which two opposite theories exist, some observers holding the fibres to be nothing more than prolongations of the nerve-cells, others believing them to be derived from the transformation of other cell structures. In the present work the latter view is upheld, and supported by numerous zoological observations made by the authors. Various phases in the transformation in question are exhibited in the plates which accompany their work. In the complex structure of the nerve-fibre other elements also enter, and these are considered here. Associations are not wanting between neuroglia and nerve-cells, as first demonstrated by Paladino, and now confirmed by the authors. The question of this relationship is dealt with in the fourth chapter, and also the further question of relationships between neuroglial cells, of neuroglia to nerve-fibres. No clear light is thrown upon the subject of relationship or association between the nerve-cells—intra-cellular association—no decisive evidence of anastomosis is advanced.

Observations upon the Anatomy and Physiology of the Cerebral Visual Centres, by C. Colucci.—The author adopted, in these researches, the method of examination of Marchi, at different periods after resection of the optic nerve, or of enucleation of the bulbus oculi, in both young and adult animals. The Weigert-Pal and Azoulay methods were also employed, and carmine staining. Some of the principal results obtained in dogs were as follows:

Three fundamental fasciculi are separable in the optic nerve—a direct (temporal), a crossed (nasal), and a papilla-macular. The visual fibres are concentrated especially in four regions of the brain—the foot of the corona radiata, the posterior segment of the internal capsule, the thalamus with the external geniculate body, the occipital lobe. Amongst the various fasciculi which arrive at these regions by various courses the following, especially, contain visual fibres: the stratum zonale, the reticulate zone of Arnold, the inferior longitudinal fasciculus, the so-called occipito-frontal fasciculus, the ependymal grey stratum, the putamen, the thalamic radiations of Gratiolet.

As a result of enucleation of one eye in new-born animals a deficiency in development of the brain, particularly in the parietal and occipital regions of the opposite hemisphere, is noticeable. The author maintains that the anatomical area for the mechanism of vision is much larger and more complex than is at present admitted. In the occipital area of vision, the centre of greatest functional intensity, are gathered up the images already prepared by a lengthy series of supplementary functional centres, situated in the optic thalamus, the external geniculate body, and the anterior corpora quadrigemina. The visual area is found especially on the external and superior aspect of the occipital lobe, but its centres and connections extend to the frontal lobes. The "occipital registration" of visual images is of service to the intellect solely in consequence of such associations, which permit of the most ample and diversified elaboration.

On Certain Alterations in Nerve-cells as a result of Death by Electricity, by G. Corrado.—The author's experiments were conducted on dogs, for the most part adult and robust. The continuous current was applied. The tension and intensity registered were from 720 to 2175

volts, and from 20 to 30 ampères. One electrode was applied to the head, the other to the lower end of the back. Contact lasted from an instant to three to four seconds. Death took place almost directly. Punctiform hæmorrhages were found at various points throughout the cerebro-spinal axis, and also bullæ of free gas on the under aspect of the cerebro-spinal meninges, and in the blood.

As regards the changes in the nerve-cells, various deformities, including laceration and mutilation, were met with. The cell contour was blurred and irregular, and at times an appearance of exudation of cell protoplasm was locally noted; vacuolation and chromolytic changes were also exhibited, also a tendency on the part of the chromatic substance to separate itself from the cell contents. The nucleus was sometimes wanting, or its contour was irregular, or the nucleus was decolourised; or it was displaced towards the periphery of the cell. Occasionally its investing membrane was ruptured. The nucleolus showed itself to be the most resistive part of the cell, being preserved and well stained even when the rest of the cell was seriously damaged, and when no trace remained of the nucleus; nevertheless, even the nucleolus was sometimes wanting. It also showed a tendency to excentric displacement, even to the extent of escape from the nuclear membrane, and transportation to the periphery of the cell. The cell prolongations showed often varicose atrophy, and also were irregularly broken, with the appearance of decomposition of the fragments. Not infrequently the apical prolongation of the pyramidal cells showed a spiral disposition.

On the Lesions of the Nerve-elements resulting from Experimental Poisoning by Nitrate of Silver, by A. Bonaggio.—Lesions are produced in the cells and in the fibres. Those in the spinal cord are particularly in evidence in the cells of the anterior cornua. There may be a systematic atrophy of the posterior columns, or of the lateral—a change initial in the nerve-fibres, and not secondary to the cell-lesions.

On the Changes in the Central Nerve-elements in Death from Cold, by B. Mirto.—The changes exhibited by these elements in the case of animals dead from cold are not dissimilar in general from those met with in intoxications, endogenous and exogenous. The author, however, inclines to the belief that death by cold is itself in great measure due to an auto-intoxication, especially as there occur in such cases grave changes in the emunctories (skin, kidneys), resulting in defective elimination of the products of metabolism.

On the Psychical Disturbances and on the Alterations in the Central Nervous System produced by Absolute Insomnia, by C. Agostini.—The various degrees of psychical disturbance, from the most elementary to a delirious condition, resulting from insomnia, probably find their explanation in auto-intoxication of the nerve-elements, the consequence of excess of disintegration without adequate reparation: a process connoted by serious and numerous lesions of the nerve-cells and their protoplasmic prolongations, especially in the anterior cerebral lobes.

The Anatomical Conditions in a Case of Unilateral Ocular Atrophy, by C. Colucci.—The author had the opportunity of examining the brain of a man who, eight years before his death, was struck on the right eye by a stone; gradual atrophy of the bulb followed. The parts were

examined after treatment in a solution of formaldehyde, 16 per cent., and nitrate of silver, 1 per cent. The case confirms many of the author's researches upon the optic paths in dogs. He describes very numerous and complicated systems of visual paths, direct and associated, and makes it clear that the visual function is subserved, in its physical basis between the retinal and cortical neurons, by structures—paths and centres—much more abundant than hitherto admitted. The occipital lobe represents the centre of maximal intensity of visual perception, but this lobe is connected by centrifugal and centripetal paths with almost all "the other cortical stations," including the frontal lobe. The hemisphere opposite to the atrophied bulb in this case was as a whole smaller than that of the same side.

The Excitability of the Cerebral Cortex and the influence upon the same of the newer Therapeutic Agents employed in Epilepsy, by C. Rossi.—The author has studied, experimentally, in dogs the effects upon the "excitability of the cerebral cortex" of the various forms of treatment of epilepsy proposed by Welch, Flechsig, and Bechterew. He finds that the treatment of Welch (sodium borate) has no influence, and that of Flechsig and the methods of Bechterew both diminish notably the "cerebral excitability," and since this diminution is due exclusively to the influence of the bromide, the useful results given by these methods of treatment in epilepsy are to be attributed solely to this drug.

On Post-epileptic Albuminuria, by P. Galante.—The researches were conducted with the trichloroacetic acid method in warm solution, a method recently proposed by Reole (and regarded by some as the most sensitive of all methods). Sixteen epileptics were under observation, all young and vigorous, without evidence of cardiac or vascular lesion: fourteen males and two females. In six there was, besides the epilepsy, more or less dementia, in two the mental powers were unimpaired, but they had occasional attacks of delirium with hallucinations before or after the convulsions. In five of the cases there was imbecility, and two others were idiots. For quantitative analysis the author employed Scherer's method as modified by Reale, and that of Primavera, the latter when the former was not feasible. The maximum and minimum figures given are those obtained by Scherer's method. The chief results were as follows:

1. Constantly after epileptic seizures albumen was found in the urine. The maximum amount found was gr. 2·0435 per cent., the minimum gr. 0·05 per cent.

2. The duration of this disturbance is various—from four to eight hours, or twelve, and sometimes more.

3. It sometimes occurs that the progressive diminution (? in the amount of albumen) is suspended for a period. In these cases the quantity of the urine increases whilst the specific gravity is notably diminished, which suggests that a diuretic action has been set up by the urea, either accumulated in the blood or produced by the excess of muscular action.

4. If albumen was found normally in the urine of these epileptics, the amount increased after the attacks, and thereafter gradually diminished down to the normal amount.

5. The more violent attacks are in general followed by a somewhat

more considerable albuminuria; a series of attacks does not lead to a like increase.

6. In two attacks of simple vertigo, which supervened in one of the two patients who presented normal psychical conditions, no albuminuria occurred.

7. The amount of indican varied with that of albumen, the former diminishing *pari passu* with the latter.

The author explains this albuminuria (1) by renal stasis, secondary to the initial tonic stage of the fit and to the dyspnœa of the second stage; (2) by cerebral excitation produced by the stasis in the domain of the intra-cranial organs; (3) by excitation produced at the bulb (albuminogenous centre of Bernand); (4) by the toxic influence exercised upon the renal epithelium by the augmentation of the normal products of metabolism (urea, &c.) and by toxic products from the intestine; (5) by the intense muscular work, increased cutaneous and pulmonary exudation, and rise of temperature.

P. Galanti publishes an article upon *Gastric Digestion in Melancholia*, from which it is to be gathered that there is in this disease a diminution in the excito-motor power of the stomach, so that after one hour of ingestion of the experimental meal of Ewald 113 to 200 c.c. of chyme, on an average 163 c.c., were to be found in that organ.

The alimentary substances being retained in the stomach, there result fermentative processes and the development of organic acids, which, according to Bouchard, would give origin to products analogous to ptomaines, with toxic effects upon the organism. There is also evidence of the transformation of peptones into organic (toxic) bases, in consequence of putrefaction. These observation are in harmony with the indications of modern research, which tend to regard melancholia as a malady due to specific toxic influences. Hypochondriacal delusions may well be ascribed to gastro-intestinal disturbances, dependent upon gastric hypokinesis and abnormal gastric digestion.

G. Bellisari has conducted a research upon the *Secretion of Hydrochloric Acid in Epileptics*, from which it appears that there exists in the stomach of epileptics during fasting a quantity of HCl, which is pretty constant. This is much in excess of that which is met with in healthy persons. The quantity of free HCl reaches its maximum after the convulsive seizures, then gradually diminishes to the point of disappearing, without being influenced by the near approach of a fresh attack.

ASYLUM REPORTS, 1897–8.

Some County Asylums.

Warwick.—We are glad to see that Dr. Millar has put before his Committee the benefits to be expected from combining provincial asylums for the institution of systematic pathological research.

The benefits to be derived from the carrying out of systematic pathological research has frequently been impressed upon us, and I am certainly of opinion that such work should be done, but I think the best method for carrying out such research, and arriving at conclusions which would be of real value, would be for this county to amalgamate with three or four neighbouring counties and have a joint laboratory, situated in a central position, and presided over by a thoroughly competent pathologist, devoting his entire time to his work, and have assistants who could pay periodic visits to the asylums and procure material for investigation. The laboratory would be available for use by the staffs of the contributory asylums, members of which could meet at the laboratory for discussion, and benefit by the instruction and research of their pathologist. This arrangement is really no novelty, nor am I advocating it as such. The London County Council have a similar institution, and there is also one in Scotland, where excellent work has already been done.

Wiltshire.—We note that a considerable number of Boards of Guardians send deputations to inspect their patients. These deputations not only leave excellent reports, which are published, but make recommendations on their own account, which show much common sense and must ease the work of the County Council in defending expenditure made on the lines of the recommendations.

Wakefield.—Dr. Bevan Lewis writes:

With respect to the modern treatment of insanity, it may, I think, be safely stated that never before in the history of lunacy in England has so keen an interest been shown in its economic and humanitarian aspects; so much thoughtful consideration given to the problems involved; or such conscientious activity been directed towards their solution. In recent efforts made by the Councils to cope with the vast aggregate of the insane population, it cannot be gainsaid that in providing such accommodation, strenuous attempts have been made to render it the best possible in accordance with the experience of bygone years and the dictates of modern science.

It is only fair to reply to the pessimism with which the results are often criticised that such measures are comparatively of recent date; that we have to contend with an ever-increasing complexity in the social fabric, itself an element in the furtherance of brain disease; and that our population has yet to be taught to a large extent that license is not liberty.

Some Hospitals.

Barnwood.—We fully endorse the following remarks by Dr. Soutar:

The general entertainments (of which there were many) to which nearly all go —such as the dances, theatrical performances, concerts, &c.—have their value in diverting thought from morbid channels, but of even higher value in rousing interest are those smaller social gatherings where each has to give of his or her talent for the benefit of all. The nearer we can approach to individualising patients and to adopting the most appropriate means in each particular case for reviving dormant interests, the greater is our success in promoting the well-being of those under our care.

The Lawn, Lincoln.—This institution does much good work with a very moderate income and with next to no aid from investments and subscriptions. We read with pleasure these remarks by the Commissioners:

We paid special attention to every recent case here and were quite satisfied as to the propriety of their detention. There are some very troublesome cases on the female side, but we are pleased to learn that Dr. Russell does not consider in

this charitable institution that he is justified in turning out a patient who is above the pauper class because she is troublesome, destructive, or of degraded habits.

Warneford Hospital.—The satisfaction which is felt on reading that Dr. Bywater Ward had been accorded a liberal pension on his retirement is destroyed by the news of his death subsequently. For many years past he managed this institution on successful lines with a slender income, which, however, is substantially increased by endowments. We wish Dr. Neil, who follows him, equal success.

Wonford House.—This is another institution which, with a moderate income, does an immense amount of good for the necessitous insane. We are pleased to read that its financial position, which was an anxious one a few years back, is steadily improving, and thus rewards Dr. Deas's unremitting exertions. Dr. Deas writes:

> But experience in other places seems undoubtedly to tend to the conclusion that the depressing types of nervous and mental instability are increasing. Some are inclined to think that the prevalence of the influenza poison lowers directly the resistive powers of the nervous system, but it is quite as likely that the depression following influenza is only an illustration of the tendency of which we are speaking, the roots of which may really lie much deeper, in the conditions of modern life, and the prevailing tone and tendencies of thought and belief. In certain temperaments these are eminently calculated to produce a pessimistic, restless, unsatisfied state of mind, ready to follow any "will o' the wisp," however baseless and extravagant, which is a very poor sort of armour when confronted with the real troubles and trials of life.

Some Scottish Royal Asylums.

Edinburgh.—The present report for 1897 enables us to get at something like the approximate cost of Craig House. To the end of the year £140,000 had been spent on buildings and equipment, interest on money borrowed during building, and all other expenses except the purchase of land. It will thus be seen that the average cost of accommodation for each of the 200 patients for which it has been designed is about £700. Comparing this with the rumoured cost per head of some of the newer pauper asylums in Scotland, it must be apparent that very excellent use has been made of the money. Of course the land has to be reckoned in addition, and also the absence of stores, laundry, and some other central and administrative provision which would come within the *per caput* cost of a county asylum, while, *per contra*, interest on money would have to be deducted. But when all this is done, an institution, which must have struck the members of the Association on its visit to Edinburgh as efficient and magnificent, liberally furnished, appropriately decorated, and in every way worthy of its high purpose, has been provided at a cost that cannot be regarded as anything but moderate. This happy result is undoubtedly due to the expenditure of an immense amount of brain, capital, and contrivance on the part of the designers.

Some excellent plates in the report will convey to those who have not seen Craig House an idea of what has been done.

James Murray's.—Dr. Urquhart writes:

> Of late years we have received many more voluntary patients for care and treatment. Some have been manifestly unsuitable for admission on these terms,

many have been habitual drunkards. There still remains a class of borderland cases who have felt that they were taking the right course in their own interests by thus entering the institution, as they would seek relief in any other private hospital. No doubt this tendency towards voluntary treatment, rather than the apparatus of legal formalities, is consequent on the changed circumstances of asylums, and a growing confidence in modern methods. When the asylum is still further developed by additional houses apart from the main building, this class of patients will probably increase, and their special wants should be met. I urge that these separate houses should be of small size, and so designed as to approximate as closely as possible to the ordinary conditions of home life.

Some Scottish District Asylums.

Barony Parish.—We commend the idea set out in the following extract from the Committee's report:

The Committee were of opinion that a more varied industrial scheme than at present exists would be helpful to the patients, and authorise the medical superintendent to make arrangements for the employment of suitable persons at gardening, basket and mat making. It is hoped the experiment in one or other of these industries will soon be tried.

The Brabazon Employment Scheme, started primarily for the benefit of poorhouse inmates, was, by permission, commenced at Woodilee on 14th January, 1898, and the success which it has attained is a powerful encouragement to the Committee to continue these efforts to secure more varied employment for Asylum patients. Woodilee is the first asylum in Scotland where such a scheme has been tried.

RETROSPECT OF PHYSIOLOGICAL PSYCHOLOGY.

By Havelock Ellis.

Acoustic Space.—Weber seems to have been the first to call attention to the errors in localising sound. The problems involved are apparently two: (1) the perception of the direction from which a sound comes and (2) the perception of its distance. Mr. Matatoro Matsumoto has lately been working at these two problems in Professor Scripture's laboratory at Yale (in continuation of experiments he had already begun at Professor Motora's psychological laboratory at Tokyo—"Researches on Acoustic Space," *Studies from the Yale Psychological Laboratory*, vol. v, 1897). In the first series of experiments the subject is seated blindfold and with head in a head-rest, in a spherical cage, so constructed that its axes furnish twenty-six terminal points. The experimenter gives a short sound at one of these points, and the subject judges the direction of the sound. A telephone or a small metallic hammer was used to produce the sounds, and fifty experiments were made for each point. If the matter were regulated by chance the correct judgments would not exceed forty per thousand trials, but they really amounted to 768, so that the perception of the direction of sound cannot be regarded as purely accidental. Moreover not one of the twenty-six directions was actually confused with more than eight direc-

tions, and of 656 possible kinds of error only 113 kinds were actually observed. No sound on the right side was perceived as being on the left side, and no sound on the left side was perceived as being on the right side. No sound on either side was localised in the median plane, nor was any sound in the median plane localised on the side. The experiments tended to show the importance of the possession of two ears in judging the direction of sound. Certain interesting differences were, however, found:—that the direction of a sound in the right hemisphere was more correctly estimated than that of a sound in the left hemisphere; the front hemisphere was more correctly judged than the rear hemisphere, and a sound in the lower hemisphere was more correctly judged than a sound in the upper hemisphere. Mr. Matsumoto concludes from these groups of results that the difference in the degrees of sensitiveness of the two ears and the action of the pinnæ are factors which render our perception of the direction of sound more or less complex.

Having thus decided that the differences between the sensations with which a sound is heard in the two ears must be regarded as the fundamental datum for localising the sound, the author proceeds to examine this datum more closely. There are four characteristics of sound-waves by which one sound may be discriminated from another—intensity, pitch, phase, and timbre. Intensity was the characteristic here chiefly studied. These further experiments, recorded in very full detail, show the existence of a continuous functional relation between the relative difference in intensity (between the impressions in two ears) and the localisation in direction; also that a perceived sound is located on the side from which the stronger sensation is received. The general conclusion is that the direction of a sound depends chiefly on the relative difference between the intensities of the component sounds heard by the two ears, the absolute intensity of the perceived sound being supplementary to this fundamental factor. The judgment of the distance of a sound depends, on the contrary, chiefly on the absolute intensity. To these factors must be added the co-operating factors of pitch, timbre, and phase. There are several theories of the way in which these factors bring about the localisation of a sound, and Mr. Matsumoto finally discusses these theories.

There is the direct theory of acoustic space, which assumes that acoustic space is analogous to tactual or visual space. There is, again, the tactual theory, which argues that the explanation is to be found in tactual sensations of the tympanic membrane.

Again, there is the theory of a special space organ, the semicircular canals.

Finally there is the motor theory—to which the author inclines,—arguing that the ear brings with it an impulse to move towards a sound, and that this motor impulse and its results are what appear to us as the localisation of sound. This theory assumes that these motor impulses are aroused in definite relations by the various factors considered, and that the form of the motor space is derived from past experience under the influence of visual space, tactual experience being also used. Thus acoustic space presupposes the existence of space forms of other sensations.

Cerebral Light.—With closed eyes we can always see irregular forms of light in the visual field. These phenomena are usually called the "retinal light," or "the *ligenlicht* of the retina," and are supposed to arise from chemical changes going on in the retina. Dr. Scripture has lately recorded some observations tending to throw doubt on this supposition (E. W. Scripture, "Cerebral Light," *Studies from the Yale Psych. Lab.*, vol. v).

With closed eyes there is only one illuminated field, not two, as we should expect if the light were retinal. Two retinal images could only appear one if there was suppression of one field, or perfect identity of form, or union by stereoscopic methods, but none of these conditions occur.

The figures do not change in position when the eye is moved, but are localised in front, and remain in the same place; though if the eyes are kept in a new position for some time the figures tend to follow and to occupy the spot of sharpest vision.

With open eyes, or with closed eyes in the case of after images, pressure on eyeball produces displacement of image. This does not occur with "retinal light."

The author concludes that these phenomena are not retinal at all, but originate in the brain, and should be called "cerebral light" and "cerebral images." "The cerebral light," he suggests, "is located in these higher centres of the brain, which are connected with visual memories and imaginations. While watching the cerebral figures I find that my visual memories or fantastic figures appear in the midst of the cerebral light, and frequently cannot be distinguished from them. The close connection of these cerebral figures with the contents of dreams has been repeatedly noticed by Johannes Müller and a series of later observers. There is also the possibility that the hallucinatory visions produced by haschish, mescal, and other drugs may be simply modifications of the cerebral light."

Sensibility in Relation to Social Condition.—Sensibility to tactile impressions and to pain varies, not only according to age, sex, and degree of degeneration, but also to a notable extent according to social class. This has lately been clearly shown by Professor Ottolenghi, who has experimented on over 1100 persons, using Edelmann's faradimeter (S. Ottolenghi, 'La Sensibilità e la Condizione Sociale,' *Arch. di Psichiatria*, 1898).

Among adult males between twenty-four and forty years of age it was found that 88 per cent. of those belonging to the professional classes became sensitive at from 10 to 20 volts; the majority of the working class adults (70 per cent.) cry at from 15 to 30 volts. The same difference was still more marked as regards sensibility to pain. It was equally marked in the case of women. The influence of social class appears at an early age. Tactile obtusion is nearly twice as frequent among working-class boys as among well-to-do boys. The influence of social condition on sensibility to pain is not, however, clearly seen until the age of about twenty. Comparing the two sexes, it is found that the influence of social condition on sensibility is greater in men than in women. The author also concludes that social condition is a more important factor than sex in sensibility, though less important than age,

and markedly less than degeneration states. This latter fact is sufficient to refute the opinions of those who believe that the characteristics of criminals are simply those of the lower social classes.

While the general results are as above stated, Ottolenghi points out that a minority of the lower social classes (25 per cent.) present no inferiority in sensibility, while a minority of the well-to-do classes (28 per cent.) of both sexes present distinct marks of inferiority. Thus an individual's characteristics are not fatally determined by the influence of social class.

The Psychology of the Slav.—Professor Sikorsky, of Kief, the well-known Russian alienist and neurologist, has recently published an interesting study of the psychological traits of the race to which he himself belongs. It may be worth while to note the main points of his analysis if, as Renan thought, the appearance of the Slavs in the fore-front of the world is the chief event of our century. The Slavs, Sikorsky finds, still possess the same traits which were attributed to them a thousand years ago, the same love of peace, the same hospitality, the same taste for work, the same family virtues, the same idealism, the same indecision of character. Some of these characteristics are traced to the inclement climate,—as, for instance, the tendency to moral analysis which distinguish the Slavs generally, and the Russians in particular. The Russian finds little in his material environment to interest him, and this development of the interior life is here regarded as the distinctive trait of the Slav genus. To the special qualities of the race Sikorsky is inclined to attribute the fact that suicide is less prevalent in Russia than in any other part of Europe. That this is a racial characteristic is supported by the fact that in Austria and Prussia the more Slavonic regions show a specially low suicide rate. Crime is also rare in Russia. Murder, though somewhat less rare than in Germany and England, is much less frequent than in the other large countries of Europe; while as regards theft, in which England and Germany stand at the head, Russia is again very low. Thus, while melancholy is a national characteristic, this melancholy does not lead to pessimism and despair. It is, indeed, the author argues, a preservative sentiment, assisting moral equilibrium and preventing outbursts of more dangerous emotions. A second fundamental trait of the Russian national character is patience. It is its idealism, however, that Sikorsky regards as the most attractive trait of the Slav race, and he finds its origin in delicate sensibility. This quality, joined to their love of peace and their sincerity, seems to account for the specially high position which, from the beginning of history, women have occupied among the Slavs. In this connection also may be noted the humanity which from the earliest times has always been attributed to this race. Procipius in the sixth century noted that the Slavs treated their captives more humanely than other peoples, and the same characteristic is said to be noted to-day. The chief unfavourable trait which Sikorsky finds in the Slavs is their indecision and weakness of will. They are excessively cautious, always timid of committing themselves definitely; and this weakness is traced to their sensibility, and to the preponderant place which the emotions hold in the moral organisation of the race.

ITALIAN RETROSPECT.

By W. Ford Robertson, M.D.

(Unavoidably postponed in publication.)

The Pericellular and Endocellular Reticula of Nerve-cells.—Professor Camillo Golgi has recently made two important communications to the *Società Medico-Chirurgica di Pavia* (19th April and 15th July, 1898), containing an account of certain structural features of the nerve-cell which he has observed in preparations by his chrome-silver method, or slight modifications of it. The first consists of a delicate investment of the cell body. Morphologically this investment presents itself in various aspects. It may have a finely reticulated structure, or form a continuous homogeneous layer, or be made up of small, closely set squames. The typical structure is reticular. The investment forms a complete cuirass, which clothes the cell body and the protoplasmic processes even to the subdivisions of the second and third order. It may be seen upon all varieties of nerve-cells, but most clearly in the large cells of the cord and other regions. Regarding previous observations of an investment of this kind, it is to be noted that Golgi, in a paper written in 1893, stated that he believed that the nerve-cells possessed a special investment, probably of the nature of neurokeratin. He attributed to the possible existence of such an investment, some weight in the way of argument against the theories of dynamic polarisation and of transmission of nervous impulses by contiguity. In 1895 Lugaro described appearances in the cells of the dentate nucleus of the cerebellum, suggesting the existence of a special investment. Two years later Martinotti described a reticulum at the periphery of the nerve-cells of the spinal cord of the dog, which he thought were composed of some kind of neurokeratin. Golgi admits that the isolating action which he and others have attributed to this supposed neurokeratin layer is still only an hypothesis.

The second structural feature is represented by a delicate and beautiful reticulum lying within the cell body. Its external aspect is sharply limited, and a clear zone of protoplasm lies between it and the surface of the cell. Towards its inner aspect, on the other hand, the threads of the network dip down to different levels. Sometimes there is a perinuclear clear zone, in other instances the threads appear to terminate in contact with the nucleus. Some of the threads end in little swellings. In the cells of Purkinje the whole reticulum is pyriform, in correspondence with the shape of the cell body, the various threads joining together and terminating in a point, or in a short filament, at the base of the large protoplasmic prolongations. He has found this endocellular reticulum in nearly all categories of nerve-cells of mammals, but has studied it chiefly in the cells of Purkinje and in those of the spinal ganglia. In the latter cells it presents rather the appearance of a convoluted irregular filamentous apparatus, especially in young animals, but connecting threads can generally be observed. He believes that this

endocellular reticulum is something absolutely distinct from either the Nissl bodies or the primitive fibrils of the nerve-cell.

In connection with this subject it is necessary to state here that Lugaro (*Rivista di Patologia Nervosa e Mentale*, 1898, f. 6, p. 265), shortly after Golgi made the first of his two communications, expressed the opinion that the pericellular investment does not constitute an integral part of the cell. He thinks that the appearance in question is due to the coloration of the interstitial tissues, or rather perhaps of an interstitial liquid. He also maintains that even if such an investment did exist, it would not necessarily present an obstacle to transmission by contact; and points out that if the theory of transmission by continuity is accepted as true, there is no need for an isolating investment for the nerve-cell. Regarding the endocellular reticulum, he does not commit himself to any opinion. It is also to be mentioned that Donaggio (*Rivista Sperimentale di Freniatria*, 1896, p. 862, and 1898, p. 460), using a modification of Ehrlich's methylene blue method, has obtained a demonstration of the presence in the nerve-cells of the higher Vertebrates of an uninterrupted reticulum extending throughout the cell body, on the one side forming connections with the nucleus, and on the other sending out delicate filaments which lose themselves in the surrounding tissues. He considers that up to a certain point this reticulum corresponds to the two described by Golgi. He can see no difference of structure between the internal reticulum and the external.

Lugaro's Theory of Cerebral Activity and Sleep.—Lugaro ("Sulle Modificazioni Morfologiche Funzionali dei Dendriti delle Cellule nervose,"—*Rivista di Patologia Nervosa e Mentale*, 1898, f. 8) has lately advanced a new theory in explanation of the different phases of cerebral activity and sleep, which, if it can be accepted, must rank as one of the most important contributions that has yet been made to our knowledge of cerebral physiology. This theory, which is based upon experimental observations of a most striking character, relates to morphological alterations in the processes of the nerve-cells. The question of the occurrence of such alterations is one that has attracted a considerable amount of attention since Wiedersheim, in 1890, asserted that he had been able to observe movements in the cells of the superior œsophageal ganglion of *Leptodora hyalina*. Rabl-Rückhard, Lépine, Duval, Van Gieson, and others have contended that nerve-cells are capable of amœboid movements, and that hysterical paralysis, sleep, certain phenomena of insanity, &c., are to be attributed to contractions of the protoplasmic processes. Others have endeavoured to obtain experimental evidence of such contractions from the action of narcotics and excessive stimulation of the nerve-cells. Some of these investigators, including Ramon y Cajal and Azoulay, have obtained entirely negative results. Others, including Demoor, Stefanowska, Querton, and Manouelian, have observed varicosity of the protoplasmic processes and loss of the gemmulæ under such conditions. Lugaro, whose own first experimental observations upon the subject yielded no positive results, contends in the paper under notice that these experiments cannot be regarded as decisive. The technic employed gives no guarantee that the nerve-cells are fixed in any particular functional state. Further, it has been conclusively demonstrated that varicosities

of the processes are frequently produced by the methods of fixation adopted by all of these investigators. Lugaro has brought to his aid a new method of experimentation, the evidence furnished by which seems unassailable. He injected with Cox's fluid the carotid artery of thirteen living dogs, some of which were in a normal condition, others narcotised by chloral, ether, chloroform, or morphia. The injection caused instantaneous death, and effected an immediate fixation of the cerebral tissues in virtue of the sublimate contained in the fluid. Pieces of the brain were afterwards placed in the same fluid for the two or three months necessary to obtain a black reaction in the nerve-cells.

Lugaro summarises his results as follows:—(1) General absence of grave alterations affecting the cellular bodies, the protoplasmic trunks, and the larger branches. (2) Presence of naked and varicose prolongations in very small numbers, and diffusely localised in two of the dogs killed in a state of consciousness, and in three under morphia. (3) Paucity and even complete absence of gemmulæ on many protoplasmic branches in animals killed in a state of consciousness. (4) Presence of slight varicosities, covered with gemmulæ, in these same animals, but especially in those under morphia. (5) Almost complete absence of varicosity, and luxurious investment with gemmulæ in the dendrites of the dogs profoundly narcotised or killed by chloroform, ether, or chloral. He points specially to the general absence of grave alterations of the cell bodies and the large protoplasmic trunks as confirming his oft-expressed opinion that such alterations in Golgi preparations are to be attributed in most instances to defects of fixation. He discusses at great length the interpretation of his experimental results, but it is impossible here to do more than give a short outline of his conclusions.

Retraction of the gemmulæ and the formation of varicosities are two independent processes. The former is related to the physiological action of stimuli, and takes place rapidly, its duration corresponding to the duration of the stimulus. The latter is consecutive to a prolonged state of excitement, occurring therefore in dogs under morphia, which acts upon these animals as a violent stimulant rather than as a narcotic. Since retraction of the gemmulæ is an expression of activity, and the presence of varicosities in the fine branches an expression of fatigue, it is natural that both should be wanting in profound narcosis. It is probable that in physiological conditions the mobility of the neurons is limited to these short and rapid movements of the terminal appendages, and that more ample modifications, such as the formation of varicosities, do not occur as part of the normal mechanism of psychical activity. When a nerve-cell is in a state of excitement, all of its connections do not come into play: if this were so there would not be a serial and logical association,—that is to say, one regulated by the laws corresponding to those that regulate objective facts which through experience have impressed themselves on the cerebral organisation; but a chaotic association, owing to the rise in the mind of elementary representations increasingly numerous, and growing with formidable geometrical progression at every transmission from element to element. It is necessary, therefore, that in functional activity the great majority of possible connections should be suppressed, and that these should be restored

whenever the active state of the element ceases, in order to render possible the reception of new stimuli from any other province. Every nervous element, stimulated in any part of it, must, while it is engaged in the elaboration of the stimulus received, retract all its drawbridges, in order to impede the access of other stimuli which might deviate or suppress the first. The spaces interposed may still be forded by stronger stimuli, which, as it were, demand the attention of the element. Thus are to be explained the occurrence of a logical association of ideas, the fixing of the attention on a particular set of ideas, the incapacity of ordinary stimuli to enter into the field of consciousness when the attention is directed to another object; and, on the other hand, how stimuli of abnormal intensity are able nevertheless to force their way in, to break the pre-existing current of ideas, and to initiate another current of psychical associations. In normal conditions of psychical activity, expansion and retraction of the gemmulæ must be diffused and active to a degree hardly conceivable. Every elementary state of consciousness is accompanied by modifications of the spines in a very large number of elements. On the other hand, these modifications do not last longer than the said fact of consciousness, and the gemmulæ quickly reassume their state of expansion ready to receive new impressions. Sleep is not associated with contraction of the protoplasmic processes or the gemmulæ. The interneuronic suspension of contact is quite a secondary matter in this relation. The characteristic condition is a general expansion of the gemmulæ, with exhaustion of their contractility at the beginning, and restoration of their capacity to contract at the end of sleep. This expansion of the gemmulæ implies multiplication of contacts and wide diffusion and consequent weakening of stimuli, which therefore subside without provoking reaction. It may be of advantage to give here a literal translation of some of Lugaro's statements upon this point. "If the cerebral organ is fatigued, if in it there abound those regressive products which are an obstacle to functional activity, under the action of stimuli there takes place more torpidly and more incompletely that retraction of the spines which isolates the systems of neurons functionating, and which secures the momentary autonomy of the functional association and of the corresponding psychical process. It follows that the logical succession of ideas and the activity of the attention are rendered more and more difficult; association becomes more and more delayed and incoherent. . . . . What can be done by the autotoxic action of regressive products can be done also by inactivity of the nervous elements from want of stimuli. If the representative psychical activity is weak, and there is a scanty inflow of external stimuli, the central elements assume their attitude of repose—that is of greatest expansion,—contacts are multiplied, the nervous processes become more and more dispersed and incoherent, the associations become enormously diffused, the stimuli subside without provoking reaction, and there results the unconsciousness of sleep."

It is evident that these new conceptions of the physical basis of cerebral activity and sleep have far more than a mere physiological interest. They have a most important bearing upon many obscure

problems in the domain of mental disease, and therefore deserve the very careful consideration of every alienist.

Giuseppe Levi's Recent Work upon Nerve-cells.—During the course of the last three years Dr. Giuseppe Levi, of Florence, has published in the *Rivista di Patalogia Nervosa e Mentale* a very important series of papers upon the histology of the nerve-cells. It is surprising how little attention has been paid to this observer's work outside of Italy. In this country it seems still to be almost unknown, while in a recent German text-book, purporting to give an account of the normal histology of the nerve-cells in the light of the most recent researches, Levi's name is mentioned only once, and that in connection with a statement of his views on a particular point which is the direct opposite of that actually made. Yet it is certain that during the last six years, in which the normal structure of the nerve-cell has been investigated by so many workers, there is no one who has made a larger or more valuable contribution to our knowledge of the subject than this Italian neurologist. His studies, which, like most of those of Lugaro, have been carried out in Professor Tanzi's laboratory, include that of the nucleus of the nerve-cell. Our knowledge of this portion of the neuron was for long very vague and unsatisfactory, but Levi has cleared away many erroneous conceptions regarding it, and has given us a most minute and lucid description of its intimate structure in different forms of nerve-cells. It may justly be said that he has done for the nucleus of the nerve-cell what Nissl did for the chromophile constituents of the protoplasm.

It is impossible to give here more than a brief summary of each of the eight papers which Levi has published. Such a summary can, unfortunately, give only a very imperfect idea of the painstaking character of his work, and of the vast range of his original observations.

In his first paper (*loc. cit.*, 1896, f. 4) Levi deals with certain structural features of the nucleus of the nerve-cell. He regards Rosin's opinion that the nucleus and nucleolus of the nerve-cell are neutrophile as quite untenable, being out of harmony with modern views of the structure of nuclei and nucleoli in general. He thinks that this observer has been misled by his use of Biondi's stain in a concentrated solution, which fails to give an elective coloration with basophile and acidophile substances. He has himself used Biondi's stain in a very dilute solution, and has obtained results entirely different from those of Rosin. He finds that all the elements of somatochrome nerve-cells, including the Nissl bodies, the nuclear membrane, the nuclear reticulum and granules, and the nucleolus (or nucleoli, since it is not rare to find a double nucleolus), are acidophile in reaction, with the exception of from two to four small particles adherent to the nucleolus which are basophile. These basophile particles, which he regards as composed of nuclein (chromatin), may be in the form of semilunar bands (often surrounding the nucleolus like a ring), or of spherical or irregular masses projecting from the nucleolus. He has never seen them detached from the nucleolus, and regards them as morphologically part of it. The irregular acidophile particles in the nucleus, often little inferior in volume to the nucleolus, and described by some as accessory nucleoli, are never surrounded by basophile particles. All the chromatin of the nucleus is represented by the little particles attached to the nucleolus. Nissl and

Dehler had previously described a deeply coloured zone at the periphery of the nucleolus in preparations stained with basic dyes, but its nature was not correctly interpreted, as elective staining methods were not employed. Levi has further observed that while in the resting condition of the nerve-cells of the spinal ganglia of the guinea-pig the nuclein is in the form of rounded particles projecting from the surface of the nucleolus; after stimulation of the sciatic nerve these particles in the related spinal ganglia have assumed the form of semilunar bands. This change of form he believes to be due to the enlargement of the nucleolus which Mann and Lugaro have shown to occur during functional activity (causing elongation of the nuclein particles). The nuclei of the *Kernzellen* and granules have distinctive features sufficient to constitute each of them a separate group of cells.

The second paper (*loc. cit.*, 1896, f. 5) contains an important contribution to our knowledge of the functional changes occurring in nerve-cells. Levi has endeavoured to further elucidate this subject by investigating the intra-cellular products of metabolism, as has already been done with much success in the case of certain other tissues. He found fixation in Herrmann's solution and staining by Galeotti's acid fuchsine and methyl green method best adapted to his purpose. His experimental observations were made upon the seventh lumbar ganglion of rabbits. In the protoplasm of the nerve-cells of the normal ganglion he found a certain number of minute granules stained deeply by fuchsin and lying between the primitive fibrils, which, on the other hand, along with the Nissl bodies, were stained by the methyl green. In the resting condition of these cells (attained by section of the sciatic nerve, with examination of the cells after two days) the fuchsinophile granules were diminished in numbers. On the other hand, after electrical stimulation of the sciatic nerve they were greatly increased in number and in size, many of them being elongated. The maximum was reached after stimulation for about two hours. Levi regards these fuchsinophile granules as a true product of the metabolism of the cell. This paper is illustrated by a very beautiful coloured plate.

The third paper (*loc. cit.*, 1896, f. 10) is a short note upon the proliferative capacity of the nerve-cell, a question upon which there has been the greatest difference of opinion among those who have written concerning it. Levi refers to the difficulty that there is in being certain that any cells observed to be undergoing proliferation are really nerve-cells. This difficulty he has himself successfully overcome by special methods. His experiments were conducted upon the cerebral cortex of guinea-pigs, and their results, so far as they are recorded in this paper, prove that at least karyokinesis can take place in nerve-cells. The strictly limited character of this proliferative process is shown in a later paper.

The next two papers (*loc. cit.*, 1897, f. 5 and 6), which are illustrated by two very fine coloured plates, deal with the comparative histology of the nerve-cells of the Vertebrates, and give a record of researches which must have been of the most laborious nature. The author has studied the cytological characters of the nerve-cells in all classes of Vertebrates excepting birds, using chiefly sublimate fixation, and staining with the Ehrlich-Biondi reagent, thionine and Delafield's hæmatoxylin. He

first gives a minute description of the structural features of the nerve-cells in a representative of each class, and then occupies himself with a lengthy synthesis of his results, together with a critical comparison of them with the conclusions of other workers. He considers that nerve-cells have still been too little studied to allow of a satisfactory classification of them being made. He retains merely for convenience the classification of Nissl into *Somatozellen* (somatochrome cells), *Kernzellen*, and *granula*, although the criteria of his distinctions are different. Taking first the somatochrome cells, he distinguishes in their protoplasm two constituents which, on the ground of their diversity of reaction with the method of Nissl, may be termed respectively the chromophile part and the achromatic (or fundamental) part. The chromophile substance has only very weak basophile properties. With Biondi's staining method it retains the acid colour and not the basic. It is essentially composed of minute granules. These are generally aggregrated into masses which have different forms in different animals. He thinks that we are not justified in attributing any great importance to the arrangement of this chromophile substance, much less in making of it a criterion for the distinction of nerve-cells, as Nissl has done. He has observed that the chromophile particles are more minute the more voluminous is the cell, independently of the position the animal occupies in the zoological scale. Dealing next with the structure of the fundamental part of the protoplasm, he refers to the views advanced by the various authorities who have written about the subject. The great majority of these writers agree in maintaining that this portion of the cell body has a fibrillar structure, but as regards the arrangement of the fibrils there is much difference of opinion. Levi has been able to throw important light upon this question by observation of the fact that there are certain animals in which some of the nerve-cells (such as those of the spinal ganglia of *Bufo* and *Zamenis*) are specially well adapted for the study of these fibrils. He believes that what appear on first view to be single uninterrupted fibrils are really composed of a bundle of discontinuous fibrillæ. The bundles of fibrils contained in the dendrites are continued into the superficial portion of the cell body, sometimes passing from one dendrite to another, sometimes turning towards the deeper portion of the cell, where the fibrils cross in all directions, forming a true network with large meshes. He thinks that in the dendrites also the fibrils form a reticulum, the meshes of which, however, are very long. He agrees with the opinion of Lugaro that the fibrils of the axis-cylinder process originate not from the parallel fibrils of the peripheral portion of the cell, but from the reticulum in the deeper part of the cytoplasm. He maintains that the "centrosome and sphere," described by Lenhossék and others, in the protoplasm of the nerve-cells of certain of the lower Vertebrates, are nothing more than peculiar vertices of fibrils which he has himself observed in certain of these animals. With regard to the relations between the fibrils and the chromophile substance, he thinks it probable that in the majority of instances the former constitute a woof which passes across the particles of the latter in every direction. He confirms the description of the nucleus of somatochrome cells given in his first paper, especially as regards the centralisation of the chromatin.

He finds the same structural features in the nuclei of this class of nerve-cells in all the animals he has studied. Passing next to the *Kernzellen*, Levi states that a few chromophile granules may be distinguished in their scanty cytoplasm, but he has been unable to see fibrils. With regard to the nucleus, the membrane presents the same characters as in the somatochrome cells, but centralisation of the chromatin is very partial and not constant. In the granula of the cerebellum, olfactory bulb, and retina the cytoplasm entirely eludes observation. It is doubtful if the nuclear membrane is always acidophile. Within the nucleus acidophile substance is always present, but it is very scanty. Chromatin is, on the other hand, abundant. The nuclei of neuroglia-cells present a nuclear membrane composed of chromatin, and a dense reticulum composed of the same substance. There is, however, no precise differential criterion by which it is possible to distinguish them from the granules. Levi believes that to complexity of structure in a nerve-cell corresponds the elevation of its function. At the same time he considers that differences of functional elevation of the nerve-centres depend not upon differences in the complexity of structure of the individual elements, but upon the multiplicity of the connections that these contract. He enumerates the morphological characters of the nerve-cell which are associated with its higher differentiation, referring specially to what he terms the "centralisation of the constituents of the nucleus," a condition which, as already indicated, occurs to the greatest extent in the somatochrome cells. In these cells the reproductive capacity is lost, being apparently entirely sacrificed in favour of the performance of their special function.

In his next paper (*loc. cit.*, 1898, f. 3) Levi returns to the subject of the reproductive capacity of nerve-cells. He gives an account of the observations already recorded, pointing out that the results obtained have been different according to the organ chosen for experimentation, and the animals upon which the researches were carried out. The object that he set before himself was different from that which other investigators have had in view, namely, to study the process of karyokinesis in nerve-cells, admitting that it occurs, and to observe what deviations from the normal it presents. He produced aseptic wounds in the cortex of guinea-pigs, and killed the animals in from one to twenty days after the operation. He fixed the tissues in sublimate and stained with the Biondi-Heidenhain reagent. He states his grounds for being satisfied that the cells in which he observed karyokinetic figures were nerve-cells, and not merely leucocytes or neuroglia cells. It is perhaps unnecessary to repeat here the minute description which Levi gives of the process of karyokinesis in nerve-cells, more especially as such a description would be somewhat difficult to follow without the beautiful coloured illustrations which accompany his paper. It is sufficient to state that he finds that the process presents in its early phases certain special features which depend upon the peculiar structure of the nucleus already referred to. Of more general interest are certain minor observations and deductions contained in the latter part of his paper. He maintains that karyokinesis cannot occur in highly differentiated nerve-cells, such as the large cells of the cord and brain. He has only been able to observe the process in the medium-sized and

small pyramidal cells of the guinea-pig's cortex. Although he has never seen complete division of these cells, he is inclined, from the advanced stages of karyokinesis which he has observed, to think that it occurs. It is, however, very probable that this multiplication of nerve-cells is simply a reaction to the stimulus which has affected them, and that it does not lead to a stable regeneration. In favour of this view is the fact, noted by many observers, that the proliferation of the nerve-cells is most active from the second to the fifth day, afterwards diminishing gradually, and ceasing about the twentieth day.

Levi's next paper (*loc. cit.*, 1898, f. 7) deals once more with the structure of the nucleus of the nerve-cell, and is mainly controversial in character. He refers to the fact that his statement that the nuclear reticulum is always acidophile in reaction, has been confirmed by Lenhossék, Ramon y Cajal, and Van Gehuchten, while his description of the nucleolus has been endorsed by the first-named authority. He criticises a recent paper by Bühler in which views are expressed contrary to his own, and maintains, in opposition to the opinion of this German observer, that the basophile character of the nucleolar particles is absolute. He also enters into a controversy with Ramon y Cajal regarding the structure of the nucleolus, maintaining, against the opinion of this authority, that it consists of two essentially different substances, namely, a peripheral portion composed of nuclein, and a central portion with acidophile reaction.

Levi's most recent paper (*loc. cit.*, 1898, f. 10) deals with the morphological modifications occurring in the nerve-cells of cold-blooded animals during hibernation. Levi and others have observed that there are no appreciable structural modifications in the nerve-cells of warm-blooded animals associated with this state. Birhler has already described certain appearances in fresh sections of the spinal ganglia of the frog associated with hibernation, but he does not record any special features recognisable in preparations fixed and stained. Levi's observations were made chiefly upon the toad, the cells of the anterior horns of the cord and those of the spinal ganglia being selected for study. His main conclusions are as follows.

The chromophile substance diminishes greatly during hibernation; in the spinal ganglia it at the same time becomes strongly basophile in reaction; it gradually increases when hibernation ceases. During hibernation droplets of fat occur in the cytoplasm, and the interfibrillar fuchsinophile granules are diminished. The partial loss of the chromophile elements during hibernation allows the fibrils of the cytoplasm to come very clearly into view. Levi has taken advantage of this circumstance to make a further study of the arrangement of these fibrils, describing it in great detail, and comparing the results of his observations with those of Bühler. He concludes, after discussing the question from many points of view, that the morphological modifications observed can only be regarded as an expression of the difference in the quantity of functional energy that the nerve-cells are capable of displaying in the hibernating state, the great diminution of the chromophile substance corresponding to the torpor and diminished excitability of the animals in winter, its increase to the condition of vivacity which they exhibit in spring and summer.

Part IV.—Notes and News.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

General Meeting.

The General Meeting of this Association was held at Chester Asylum, Upton, on Thursday, February 16th, under the presidency of Dr. A. R. Urquhart.

Present: H. Hayes Newington (Treasurer), J. Wiglesworth, R. Percy Smith, David Nicholson, J. B. Spence (Registrar), E. B. Whitcombe, G. W. Mould, A. W. Campbell, Charles Mercier, T. Seymour Tuke, J. F. G. Pietersen, Stanley A. Gill, S. R. Macphail, W. Bubb, A. Lawrence, M. D. Macleod, G. E. Mould, John Sutcliffe, David Bower, James Chambers, C. K. Hitchcock, Edwin Goodall, T. Aldous Clinch, David Blair, Harry A. Benham, Llewelyn F. Cox, J. Carlyle Johnstone, R. D. Hotchkiss, Fletcher Beach, D. M. Cassidy, and Robert Jones (General Secretary). Apologies for non-attendance were received from Drs. Law Wade, A. P. Russell, L. A. Weatherly, W. R. Watson, H. Rayner, and J. G. Soutar.

The late Dr. J. H. Paul.

Before the commencement of the business the President referred to the great loss the Association had sustained in the death of Dr. Paul. He was elected Emeritus Treasurer in consequence of his long and valuable services to the Association. Some years ago, on his retiring from active duties, they specially marked their appreciation of his services by a testimonial; they had now to send a message of condolence to his family. Nothing he could say would exaggerate their feelings on that occasion. The late Dr. Paul was a dear old friend to a great many of them, and a very valued and upright member of that Association.

New Members.

The following members were then elected:—Alfred Cowper, W. W. Herbert, H. Wolseley Lewis, Wm. Hy. Christopher Macartney, Peers Machulich, Corbet W. Owen, Robert N. Paton, John Richards, J. G. Smith, J. M. Thom, and J. M. Wrangham.

Dr. Clinch's Demonstration.

Dr. T. Aldous Clinch then gave an exhibition of microscopical slides and described Unna's polychrome methylene blue method for staining the nervous system. It is one by which staining of the finest elements of nervous tissue is rendered possible after any of the hardening methods in general use. Previously special hardening methods were necessary for different stainings, in this way multiplying vastly the work of complete microscopical examination of nervous tissue.

Papers.

Dr. David Blair read a paper upon "Acromegaly with Insanity" which was followed by a discussion (see page 290).

A paper by Dr. J. M. Renton upon "Asymmetry of the Skull in the Insane" was read by Dr. Ambler in the author's absence. The publication of this paper is unavoidably delayed.

The Danger of Scalding in Hot Water Baths.

Dr. Robert Jones (Secretary) then described "A new method of ensuring safety from scalding in the use of hot water baths," invented by Mr. John Malcolm, B.Sc., Associate Member of the Institute of Civil Engineers. Models and drawings were exhibited.



John Haybal M.D. Lond.

Obiit 29th January 1899.



This apparatus is designed to meet a condition which exists in all institutions where a number of persons have to be bathed at one time, and it is more particularly applicable for use in asylums where the temperature of the water for all baths is the same. The most common method now in use for obtaining the bathing water is to lay on to each bath a cold and hot water service, and the attendant allows a certain amount of water from each service to run into the bath until the required temperature is reached. The adjusting of the valves on these services takes a certain amount of time, and there is also the possibility that through the carelessness of the attendant the water in the bath may be raised to too high a temperature. Also this method is most suitable where spray baths are substituted for the ordinary baths.

The apparatus shown has been arranged to deliver water at a constant temperature, and consists of three parts:—1st. The heater. 2nd. The arrangement for turning on the water. 3rd. The means provided to prevent the heating of the water to an extent which might be dangerous.

The heater consists of two tubes, one being secured inside of the other, the outer one being an iron tube, and the inner one a copper tube. The water to be heated is made to pass through the outer tube, and steam is caused to pass through the inner tube, and if the flow of water through the outer tube and the steam pressure can be maintained constant, it follows that the water will be delivered at an uniform temperature. To ensure a constant velocity of flow of water the supply is taken from a tank, and a constant steam pressure is obtained by passing the steam through a reducing and safety valve.

Valves are placed on the cold water and steam supply pipes, and are opened and closed by a lever. These valves are connected to the lever in such a manner that the one controlling the cold water supply always opens first when the lever is moved to the "on" position, and allows cold water to enter the heater before the steam valve opens. Similarly, when the lever has been at the "on" position, and is moved to shut off the supplies, the steam valve is shut first, thus preventing water at a higher temperature than the normal being delivered when the bathing starts and stops.

The safety valve on the apparatus is a mercurial thermometer, having a platinum wire fused into the bulb, and a second platinum wire fixed so that when the mercury expands and comes in contact with it an electrical circuit is completed.

The thermometer is placed in the water which has passed through the heater, and the second wire is secured at the point to which the mercury will have expanded when the temperature of the water will have reached say 106° Fahr. The completing of the electrical circuit causes the electro-magnet to attract the armature. This action allows the hammer to fall and knock away the catch which supports the hammer. The hammer then falls, and in so doing shuts off the steam supply so that the temperature of the water is prevented from rising further.

This apparatus can be made to supply water for any number of baths or spray jets, the size of the heater being proportioned to the amount of water which will be required to pass through it.

No. 2. Leclanché cells of the ordinary zinc and porous pot form provide the current necessary for the electro-magnet.

This contrivance is not designed to replace the "perfect" attendant; it is an acknowledgment of man's imperfections and limitations, and ranks with the clinical thermometer or the fireguard. By its use forty or more baths can be used at the same time by raising a lever, and the water in all of them delivered at an uniform temperature, thus saving human labour and ensuring precision and accuracy.

The President described the Gegenstrom apparatus, on a similar principle, which is widely used in American asylums. He had recently obtained one from the makers in Germany, and after thorough trial would report upon it at greater length. He also showed a bath tap which had been in use at Murray's Asylum for some ten years, and which had been described in the JOURNAL for April, 1890.

A NEW LOCK.

The President showed a lock which promised to be of service, as it was an adaptation of an old lock to modern ideas. It had been worked out by Mr. Thomas Whyte, Engineer to Murray's Asylum, and had been named the Excommunicator

Action Lock. As usual, the male and female division locks were controlled by different keys, and both by the master key. Objections have been urged against the usual form, that the bolt is twice thrown out, necessitating a large lock and a weakening of the lock rail; the master key throws an obstruction in the way of the journeyman key, thereby causing breakage and damage to lock and key; the master key is formed by extra cutting, thereby rendering it easy to convert a journeyman key into a master key with a slight application of a ward file. The advantages claimed for the Excommunicator Action Lock are:—1. The bolt is only thrown out once. 2. A second turn of the master key throws the lock out of gear, so that the ordinary key turns in the lock without touching the bolt or straining the parts. 3. All the working parts are made to standard gauge and fixed with screws, so that repairs are easy and occupy a minimum time. 4. The master key is least cut, thereby making it impossible to convert a journeyman key into a master key without special skill. 5. The whole parts are simple in construction and simple in action. 6. The cost of altering old locks to this design is very small.

Members afterwards dined together at the Grosvenor Hotel, Chester.

SPRING MEETING OF THE SCOTTISH DIVISION.

A meeting of the Scottish Division was held in the hall of the Faculty of Physicians and Surgeons, Glasgow, on Thursday, 9th March, 1899. In the unavoidable absence of Dr. Urquhart, President of the Association, Dr. Clouston was called to the chair. The other members present were Drs. Campbell Clark, Carswell, Graham, Hotchkiss, Ireland, Carlyle Johnstone, Macpherson, Watson, and Turnbull (Secretary).

The minutes of the previous meeting were read and approved.

Hugh de Maine Alexander, M.D., Assistant Physician, Perth District Asylum, and Joseph Green, M.B., Ch.B., Assistant Physician, Gartloch Asylum, were admitted as members of the Association.

It was agreed to nominate Dr. Turnbull for the Divisional Secretaryship; and after discussion it was remitted to the Chairman and the Secretary to prepare suggestions to the Council for the filling up of the vacancies which will occur in July next by the retiral of one Scottish representative on the Council and of one of the Examiners for Scotland.

Dr. Campbell Clark asked what had been the outcome of the recommendation made by the Division in regard to the payment of the expenses of the Secretaries; and it was explained that the matter was not yet decided, but would be under consideration by the Council at the May meeting.

Dr. Carlyle Johnstone referred to the question of having reporters at the Divisional meetings, and mentioned that a motion for dispensing with reporters is to be submitted to the Council at the meeting in May.

Dr. Ireland read a paper on "The Causes of the Increased Frequency of Suicide," which will appear in a future number of the Journal.

Inebriates' Act.

The Chairman said he would like to make a few remarks on the "Inebriates' Act." Lord Balfour appointed a Committee to consider and report as to the working of the Act in Scotland, at first without a doctor on it, but afterwards did him the honour of adding him to the Committee. The Committee did their very best to draw up regulations to work this Act. In regard to himself, he always had this in mind in helping to draw these regulations, that they should be suitable not only to the present Act, for the criminal inebriates for which that Act was passed, but to the future Act which they all hoped to get soon for the non-criminal inebriates, so that the rules and regulations will practically suit the one as well as the other. He might mention the provisions that have to be made. First, a state inebriate reformatory; very likely a portion of the General Prison, Perth, will be taken for that purpose. Second, certified inebriates' reformatories, which can be set up by any Town Council or County Council or private individual; and those will, he hoped,

be put up in Scotland in various local centres within a short time. They all ought to do their utmost to get the magistrates to take an interest in this question, and to set up one of these reformatories. Third, to license out inebriates in the same way as they license out lunatics, to be under the control of respectable trustworthy people, and thus bring them under the influence of family life. The members of Committee were disappointed with an alteration made in the regulations as first proposed, with the result that now a man must be three months in an inebriate institution before he can be licensed out, which he thought a mistake. It would have been better to have power to license certain suitable cases out at once. The Committee also recommended that 8*s.* a week should be allowed by the Treasury, but this had been cut down to 6*d.* a day, 3*s.* 6*d.* a week, which was an utterly inadequate sum for the boarding out of any person, and will simply nullify the boarding-out clauses.

INCIPIENT AND UNCONFIRMED INSANITY.

Deputation to the Lord Chancellor.

The following is a report of the interview which a deputation of the British Medical and Medico-Psychological Associations had recently with the Lord Chancellor.

The deputation consisted of Dr. W. Douglas, Mr. George Eastes, Dr. W. J. Mickle, Dr. G. E. Shuttleworth, Dr. Fletcher Beach, Dr. G. F. Blandford, Dr. H. Rayner, Dr. G. H. Savage, Dr. Ernest W. White, Dr. Dawson Williams, and Mr. Francis Fowke, General Secretary of the British Medical Association.

Dr. Farquharson, M.P., having briefly introduced the deputation,

Dr. Rayner said that the proposal which the deputation wished to make had been the subject of a resolution passed in 1896 by the British Medical Association. He (Dr. Rayner) had been moved to read the paper which led to the resolution by his experience in the early treatment of insanity, especially at the out-patient department of St. Thomas's Hospital. In every case of mental disease there was a stage between health and certifiable insanity. That was shown by many recoveries without certification, and by the statements as to the duration of the disorder prior to admission into asylums. The cases were nearly always reported to have been mentally affected for three, six, or twelve months. In order that the existence of such a stage should be legally recognised, the deputation proposed that the Lunacy Acts should be amended by a clause similar to that which had been in force for thirty years or more in Scotland.

The Lord Chancellor asked to be referred to the provision in the Scots Act.

Dr. Rayner, having pointed out the section of the Scots Act: "Provided that this enactment shall not apply to any case where the party so received and kept has been sent to any such house for the purpose of temporary residence only, not exceeding six months, and under the certificate of a medical person, which certificate shall be in the form of Schedule (G) hereunto annexed." The advantages of the proposed clause were that the Commissioners of Lunacy would be informed of the number of cases treated, of the duration of treatment, and the persons undertaking the treatment. This would give the Commissioners powers of supervision when necessary, and probably ultimately of regulating the treatment by such provisions as their experience would suggest. No pretext or excuse would be left to persons who now evade the law. The deputation believed those improvements would lead to a large amount of recovery in the early stage, which did not now take place.

Dr. Blandford said that the medical profession had been teaching for many years that insanity was a disorder to be treated by medical means, and that it was curable in the early stages. It was therefore of the greatest possible importance that it should be treated at a very early stage. The Lunacy Act of 1890 had put a different complexion upon the matter. It enacted that every person who was of unsound mind should be incarcerated by the order of a magistrate.

The Lord Chancellor pointed out that Dr. Blandford was somewhat misstating the effect of that Act, for which he was responsible. It was not that a person of

unsound mind should be incarcerated by the order of the magistrate, but it was that the person should not be incarcerated unless a magistrate should so order.

Dr. Blandford said that that was what the friends of patients so strongly objected to. Consequently the patients were not brought under treatment in an early stage. Friends in many cases sought to evade in every way the requirements of the Act, and they would either send them abroad or send them to Scotland, or put them at the top of a house and tie them down there; they would do anything rather than face the magistrate unless they were absolutely obliged to do so, and very often most valuable time was lost in that way. Then when the case became chronic, and they could not do without the magistrate any longer, they brought the patient to an asylum, when too often the chance of recovery was past. He thought that if the clause which the deputation suggested were to become law, it would render it possible to treat many cases without the interference of a magistrate, and without certification, and in that way a very great deal of good might be done and a great number of people might be saved from the stigma of certification by a magistrate's order.

Dr. Savage concurred in everything that had been said, but felt that certain other practical points might be considered. There could be no possible doubt that there was a very strong feeling against certification among friends of patients. Certification in cases that were quite curable had a very serious effect; it might put an end to a partnership in some important business, or it might lead to discharge from an important position in life. This was not necessary, because insanity was so medically curable in many forms that to treat a person once insane as for ever incapable of transacting business was altogether wrong. The friends would accept anything rather than open certification, and the consequences, as they were seen by those engaged in this department of medical practice, were that patients were constantly sent away with male or female nurses. They were sent to farms, or small houses were taken for them in out-of-the-way parts of the country by the relations, and nurses or attendants were placed in those houses in charge of the patients, the letter of the law being fulfilled in some cases by a relation living near and coming and spending a certain number of hours in the house—perhaps not with the patient. Many patients were sent abroad, aud their mental condition was not benefited thereby in any way. Cases of recurring attacks of insanity lasting only weeks or months occurred; the forms of insanity were so acute that no one would receive them in an asylum as voluntary boarders, yet those persons would certainly get well in a short time if properly treated. The deputation thought it would be a boom to these cases if they could be placed under temporary care without certification.

The Lord Chancellor asked if the deputation suggested that the law should be altered in respect of patients who were properly certifiable at present.

Dr. Savage said that the deputation desired not that the law as such should be altered, except to the extent that persons who were certifiable, but who were suffering from quite temporary maladies, might by the permission of the law be allowed to be placed, as in Scotland, under private or single care and detained as patients under those conditions.

The Lord Chancellor said he had great sympathy with the clause suggested by the deputation, and he thought it might be defended on the grounds that it had been defended, but he was not quite sure that he should like so long a period as six months.

Dr. Savage pointed out that that was the limit in the Scots Act.

The Lord Chancellor, continuing, said that he was not quite sure whether there ought not to be a shorter limit, subject to its being renewed, but that was a matter of detail. With the substance he very much sympathized, and felt that there was a very great deal in what the deputation had suggested. In fact their opinion must be of great weight with anyone who had to deal with the subject of the law of lunacy. What he deprecated was the view which had been expressed that the intervention of the magistrate was objectionable, and that it ought to be got rid of. He could not agree with anything that would tend to diminish the safeguards for the liberty of the subject. Whether rightly or wrongly, a great many people in this country conceived that many persons had been detained in asylums who ought not to have been detained at all. It was right to have some sort of judicial determination as to the state of mind of the patients which would justify the

restraint of the liberty of the subject. He was very strongly in favour of that proposition, and he should do nothing to diminish or qualify that. If people disobeyed the law, that seemed to him to be a reason for making the law more stringent. The law of larceny would not be abolished because, notwithstanding all laws against larceny, people still stole. Such a line of legislation could not be followed. As to what had been justly described as non-confirmed insanity, or incipient insanity, cases which were capable of being cured, he might say that he entirely sympathized with their object, and certainly, as far as he was concerned, he would try and give effect to their suggestions.

MEDICO-PSYCHOLOGICAL SOCIETY OF QUEBEC.

At the meeting held at the Protestant Hospital for the Insane, Verdun, on the 15th October, 1898, the new Rules of the Society, prepared by Messrs. Villeneuve and Chagnon, were read and adopted.

The following were elected honorary members of the Society:—Dr. H. M. Hurd, Baltimore; Dr. Ritti, Charenton; Dr. Urquhart, Perth; and Dr. Villers, Brussels.

Several important papers were read, which we hope to publish in the next number of this Journal.

With reference to *Medical Certificates and Commitment*, Dr. VILLENEUVE said that he had been continuing his studies on the subject. He gave a synopsis of what had been done in other countries, and pointed out that the medical certificates should show (1) that the person is insane by a detailed statement of the symptoms observed by the medical man; (2) that there is necessity for placing the person in an asylum for treatment or for the public safety—as shown by his actions and circumstances, which should be proved by the depositions of eye-witnesses; (3) that the physical condition of the person permits of his removal to the asylum. The Society adopted a motion by Dr. Villeneuve to remit this question to a special committee for report.

At the next meeting the question of alcoholism and the establishment of special hospitals for alcoholics will be discussed.

DEPARTMENT OF HOSPITALS FOR INSANE, VICTORIA.

FOURTH ANNUAL CONFERENCE OF MEDICAL STAFF.

The first meeting was held at Kew on the 5th October, 1898; present, Dr. M'Creery in the Chair, Dr. Watkins, Dr. Beattie Smith, Dr. Samson, Dr. Lathbridge, and Dr. Steell.

Dr. BEATTIE SMITH stated that Dr. Norton Manning, whilst assuring them of his warm interest in forming a Medico-Psychological Association, said that he would be precluded from joining because of imminent changes. Since then, New South Wales had, by resignation, lost the services of Dr. Norton Manning, who, for a lifetime, had firmly, judiciously, and steadily forced upon his Government the necessities for advanced treatment of the insane, with great success. Dr. Eric Sinclair, his successor, as might reasonably have been expected, excused himself from being present on the plea of his whole time being then occupied, and at the moment not wishing to bind others without consulting them.

Dr. M'CREERY then moved—

"That an Intercolonial Medico-Psychological Society be formed, and that invitations be sent to all the Asylums Staffs of the various Australasian Colonies to be present next year in Melbourne, with a view to forming an Association which may become affiliated with the Medico-Psychological Association of Great Britain and Ireland."

This was seconded by Dr. WATKINS and carried unanimously, and the Hon. Secretary was asked to acknowledge the letter from the Home Association, explaining the action taken.

NURSING.

The subject of nursing lectures, Dr. M'CREERY stated, had advanced a step further, as we were now in the midst of the first annual compulsory examination for probationers, prior to their inclusion on the staff at the end of twelve months' service. The examinations were being conducted by a Board, consisting of the Inspector of Asylums and Drs. Watkins and Beattie Smith, each of whom examined all papers, which were numbered, and two of them carrying out orals and practicals, no examiner conducting his own. So far as the seniors were concerned, the examination was not yet compulsory, and the only thing one could do was to block the promotion of those who were not efficient, and who had not availed themselves of the facilities afforded by lectures and demonstrations, and so accept the decision of the Public Service Board that the first qualification for promotion was merit.

Dr. M'Creery stated that some time ago the Under Secretary had asked him to draw up new *rules and regulations* for the guidance of attendants and nurses, as the Public Service Board considered the existing ones not clear enough, and these had now been prepared and were ready for circulation.

On the motion of Dr. WATKINS, it was decided that Mrs. Rosenblum be communicated with in a sympathetic letter on behalf of the staff, on the occasion of the death of her late husband, our friend and fellow-worker.

BORDERLINE INSANITY.

Dr. M'CREERY now read his paper entitled "Borderline Insanity, or Imperfect Insanities," comprising under the following four headings a well-condensed series of views :—(*a*) a want of full development cannot resist wrong actions, yet not insanely certifiable; (*b*) a fixed chain of delusions on certain subjects, while acting well on others; (*c*) controlled centres enfeebled, cannot avoid temptations; (*d*) intellectual faculties developed though moral tone bad; a danger to society as constituted, through enfeebled will and loss of control due to drugs, alcohol, &c.

The main contention of this paper was on *will power*. *Will*, Dr. M'Creery stating, was "the act of recalling and retaining ideas, with their accompanying emotions, in the field of consciousness."

After a discussion and vote of thanks for the paper, the meeting adjourned till 6th October, when Dr. GODFREY presented some observations on the symptoms and treatment of cocainomania, which were well received and discussed.

Dr. SAMSON next gave the meeting some of his "Views on Asylum Construction," and then Dr. Beattie Smith read "Notes on some Surgical Cases at the Ararat Hospital for Insane," by Dr. JAMES L. THOMPSON, including (1) a case of malignant disease of the testicle; (2) gangrene of the feet; (3) forcible rupture of the urethra; and (4) gastrotomy, together with the operative interference deemed necessary in each case.

The last paper comprised some clinical histories of cases under *thyroid treatment* by Dr. BEATTIE SMITH, who detailed how in one case he had endeavoured, and that, too, with the crowning success of ultimate recovery and discharge, to set up artificially in the patient that inflammatory fever and thermic condition which, by reason of episternal abscess, had proved useful to the patient's mind at an earlier period of her history; and how, in another case, he had, while others were under treatment, given thyroid tablets to a lady whose case was of some years' standing, though of recent admission, and had, for brevity's sake, been viewed, both before and after admission, variously, and now was placed under *diagnostic treatment*, with the happiest results. An old myxœdema, of no very great development to outward appearance, being discharged from the Asylum after about four months' treatment; the case-book notes from the commencement of the thyroid being :—General increase of body bulk; firm inelastic swelling of skin, with harsh dryness; dulled expression and imperfect hair nutrition; the supra-clavicular subcutaneous tumefaction, and the thickened fingers, being noticeable, as also the mottled face and red nose end; the memory was defective; there was irritability and suspiciousness with hallucinations, and now we have dementia with heavy, slow gait.

The thyroid was pushed by weekly increased doses from five to twenty grains

thrice daily, with the result that she became brighter, happier, conversed freely, was questioning about her surroundings, her home, and her relatives. She took her diet well all through. "After the weakness from confinement to bed for nearly two months she became busy in sewing, mending, piano playing, and took daily walking exercise specially regulated by accompanying nurse." "Gradually, from the commencement of the ten grains dose thrice daily, the improvement took place in the lessening of the subcutaneous thickening, and the brighter and more cheerful appearance." "A long day can now be spent with sewing, walking, and inside amusements, with judicious rests." "Returned after a two-mile walk, happy and delighted, and, though still with some mental impairment, anxious to return home." "Has been out for the day with her husband driving and walking, returning with no reluctance, knowing that to-morrow she will be leaving for home." "Left for home with husband, under instructions to continue the thyroid treatment, and report at intervals." "Report at end of month very satisfactory."

With the usual vote of thanks for this paper, and to Dr. M'Creery for presiding, the Conference terminated.

THE AFTER-CARE ASSOCIATION.

The Annual Meeting of the Association for the After-Care of persons recovered from Insanity was held under the presidency of Sir S. Wilks, F.R.S., at his residence in Brook Street, Grosvenor Square. The Secretary, Mr. Thornhill Roxby, reported that there had been a considerable increase in the number of cases dealt with, these having been 186 (55 males) in 1898, as compared with 147 in 1897. The receipts of the Society had also advanced from £561 in 1897 to £652 in 1898. Increased success also had attended the help given in starting these persons again in life.

The meeting was addressed by Sir S. Wilks, the Bishop of Islington, the Archdeacon of Essex, as well as by Drs. Savage, Blandford, and Claye Shaw.

The Archdeacon of Essex spoke very favourably of his personal experience of the assistance afforded by the Society to persons in whom he had been interested. The meeting terminated by a vote of thanks to Sir S. Wilks.

RECENT MEDICO-LEGAL CASES.

Reported by Dr. Mercier.

[The Editors request that members will oblige by sending full newspaper reports of all cases of interest as published by the local press at the time of the assizes.]

Reg. v. *Keating.*

Prisoner, a servant æt. 19, was indicted for the attempted murder of her illegitimate child, which she endeavoured to drop into a canal. Dr. Gill, medical officer of the prison, and Dr. Leg, of Prestwich, both stated that on the night of the attempt the prisoner was probably suffering from acute melancholia.—Guilty, but insane.—Manchester Assizes (Mr. Justice Phillimore).—*Times*, November 17th.

Reg. v. *Taylor.*

Walter Taylor, æt. 56, ex-bailiff, was indicted for attempting to murder Judge Parry. The judge had occasion to deprive the prisoner, on sufficient cause, of his bailiff's certificate. Prisoner forced his way on to the bench and fired three shots from a revolver at the judge, two of the shots taking effect in his honour's head. The third shot was fired as the prisoner was being held down on the floor, indicating that the attempt was a very determined one. For the defence it was shown

that the prisoner had recently suffered misfortunes, and it was contended that although he could not be considered insane, yet these misfortunes, occurring in a man of excitable nervous disposition, had to some extent unhinged his mind, and rendered him incapable of appreciating fully the circumstances. In summing up, the judge agreed that the crime was so outrageous that it took a great deal to make them believe that a sane man would commit it; nevertheless, he scouted the idea that the prisoner was insane, and from the very full report it seems as if he did not appreciate, or paid no attention to, the contention of the defence, that, under stress of calamity, a man's mind might be brought into such a condition that he was partially irresponsible. The jury found the prisoner guilty, but recommended him to mercy on account of his age and previous good character. He was sentenced, nothwithstanding, to twenty years penal servitude.—Manchester Assizes (Mr. Justice Phillimore).—*Manchester Guardian*, November 16th.

Reg v. *Dowling and Dowling.*

Fredk. Dowling, æt. 63, tailor, and Charlotte Dowling, æt. 67, his wife, were charged with the manslaughter of their son. The deceased was of weak intellect, bedridden and blind. He lived with his parents in one room, which was in a condition described as terrible. It was not suggested that he was starved, but he suffered from severe bedsores, and the prisoners were charged with culpable neglect in not calling in medical assistance. Guilty, but recommended to mercy on account of their age. Fifteen months hard labour.—Winchester Assizes (Mr. Justice Kennedy).—*Times*, November 24th.

Reg. v. *Holbrook.*

Maurice Holbrook, æt. 42, cabman, was indicted for the wilful murder of Percy Hayton. The prisoner went to the police station and gave himself up for having killed the boy, and search being made, the body of the boy, æt. 9, was found in a field with his throat cut. The prisoner did not know the boy or his parents, and there was no discernible motive for the crime. It was suggested by the prosecution that the prisoner was insane, and Dr. Worthington, superintendent of the Hants County Asylum, who had examined the prisoner on behalf of the Treasury, gave his opinion that the prisoner, who was an epileptic, was not responsible for his acts when he committed the crime. Guilty, but insane.—Winchester Assizes (Mr. Justice Kennedy).—*Times*, November 24th.

This case is rather important. The prisoner had left the workhouse only three days before, and we may therefore presume that his mental state did not then present sufficient ground for his transfer to the County Asylum. He was epileptic, and committed an apparently motiveless crime, but this crime was not done during post-epileptic automatism, for he himself was the first person to give notice of the murder. It was an instance of the insane and apparently motiveless acts of violence which are not unfrequently committed by epileptics during their inter-paroxysmal intervals, instances of which have been before recorded in this column. That similar acts are committed by epileptics during post-paroxysmal automatism is well known, but it is important to recognise that these acts are not necessarily confined to nor distinctive of the post-epileptic automatism, but may be committed by epileptics at times which appear to be independent of the fits.

Reg. v. *Nyland.*

John Nyland, æt. 42, journalist, was indicted for causing to be received by Archibald Johnstone a letter threatening to murder him. Before the prisoner was called upon to plead, the issue was raised whether he was fit to plead to the indictment. Mr. C. Read, M.R.C.S., stated that in his opinion the prisoner was of unsound mind, did not realise the nature of the charge against him, and was not in a condition of mind to give proper and reasonable instructions for his defence. This witness was cross-examined at some length and with ability by the prisoner. Dr. Scott stated that he considered the prisoner insane. The judge pointed out that the articles in the *Daily Telegraph*, which had provoked the prisoner into writing the letter, were in bad taste and cruel, but that there was such an enormous disproportion between the offensive nature of the articles and the threatened retaliation, that the jury might very well say that a man who could not appreciate that

disproportion could hardly be in a fit state of mind to conduct his defence or take his trial. The jury found that the prisoner was unfit to plead, and that the articles which had provoked him were quite uncalled for. In this verdict the judge expressed his full concurrence.—Central Criminal Court (Mr. Justice Wills).—*Times*, November 25th.

An uunsual instance of procedure. The preliminary issue whether a prisoner is fit to plead is not usually raised unless the prisoner is very deeply insane, either extremely demented or wildly maniacal. In this case the prisoner had sufficient ability to cross-examine with considerable acumen. The case is noteworthy from the formal ruling of the judge that a great disproportion between provocation and retaliation is itself a sufficient proof of insanity to exonerate a prisoner from being dealt with as an ordinary criminal. This is a doctrine which medical men have often brought forward in courts of law, and which the judicial mind has always shown the utmost reluctance to admit. It is important to have a case on record in which the doctrine has been explicitly accepted by the bench. Whether it was worth while to invoke the machinery of the law to protect a journalist from the natural consequences of jeering at a lunatic, a thing that no decently conducted asylum attendant would think of doing, is a matter of opinion.

Reg. v. *King.*

Philip King was charged with the murder of his mother-in-law, his wife, and his two children. Prisoner had murdered the two women in a very brutal manner, and the two children were found in the same room, the one smothered, and the other dead of cold and starvation. The plea of insanity was not raised, and the case is mentioned here mainly to show that a very brutal and multiple murder does not necessarily imply insanity on the part of the murderer.—*Dublin Express*, December 13th and 14th.

Reg. v. *Schneider.*

Prisoner, a butcher, æt. 36, was charged with the wilful murder of Conrad Berndt. The unfortunate Berndt was murdered and placed in an oven, in which his remains were partially consumed. Counsel for the defence suggested insanity, but called no evidence, and on the part of the prosecution the evidence of sanity was strong.—Guilty.—C. C. C. (Mr. Justice Hawkins).—*Times*, December 14th and 15th.

Reg. v. *Lawley.*

William Lawley, 55, tradesman, was charged with the murder of his wife. In August, 1897, he became insane, violently attacked his wife and was sent to Coton Hill Asylum. In May, 1898, he was liberated on trial and lived with relatives and in charge of an attendant in Manchester. On July 2nd the attendant was dispensed with. On July 16th he left Manchester, went to his wife's home at Much Wenlock and murdered her. Without hearing counsel for the defence the jury found the prisoner guilty but insane.—Shrewsbury Assizes (Mr. Justice Ridley).—*Times*, November 1st.

Illustrates the great difficulty in deciding when a lunatic is sufficiently recovered to be at large.

Curtis v. *Callingham and others.*

A probate case. The will was dated July, 1894, and it was shown that the testatrix had suffered from delirium tremens in 1878, and that in her later years she had been scarcely ever sober. One or two witnesses had seen her sober occasionally, and the witnesses to the will stated that she was sober when she executed the will, which was upheld by the jury.—Probate Division (Mr. Justice Barnes).—*Times*, January 26th.

The evidence of incapacity was very strong indeed, but the trial had the usual result.

Hodson and Another v. *Park.*

The defendant presented a petition for a reception order with respect to his wife, the daughter of the plaintiffs, and in the statement of particulars attached to

this petition he alleged, in answer to the question "Whether any near relative has been afflicted with insanity?" that his wife's mother (one of the plaintiffs) had been afflicted with puerperal insanity. For this statement the plaintiffs claimed damages. Application was made to Master MacDonell to strike out the statement of claim as disclosing no cause of action, and to dismiss the action as vexatious and an abuse of the process of the Court, and the Master had made the order asked for, but Mr. Justice Grantham reversed his decision. The defendant now appealed against Mr. Justice Grantham's refusal. The contention was twofold, first that the proceeding, in which the statement complained of as libellous was made, was a judicial proceeding, and the statement was therefore absolutely privileged; and second that the words were not capable of a defamatory meaning. The Court held that a justice exercising jurisdiction in lunacy as set out in the statement of claim (*i. e.* receiving a petition for a judicial reception order with respect to a person alleged to be in the place in which the justice has jurisdiction) was exercising judicial functions, and that anything stated to him in the course of those proceedings was absolutely privileged, and the appeal was allowed.—A. L. Smith, L. J., and Chitty, L. J.—*Times*, January 28th.

Reg. v. *Boakes.*

George Henry Boakes, 28, watchmaker, was indicted for the murder of Bessie Elizabeth Lawrence. The prisoner had known the deceased for some time, and about a year before the murder had asked permission to "walk out" with her. Her father had refused, on the ground that she was too young to be engaged; she was then sixteen years old. On the afternoon of the murder, the deceased, with two friends, was walking along the road towards her father's house, and passed the house of the prisoner, at the door of which the prisoner was standing. When she had got twenty or thirty yards past the house, the prisoner overtook them and pushing the girl's companions on one side, he placed a revolver against her head and fired twice in rapid succession. He then shot himself through the head. The girl died at once. The prisoner recovered. On the night of the murder he said to a policeman "I gave her two and myself one; I meant three for her and two for myself." Counsel for the prosecution, in opening the case, told the jury that the real question that they had to decide was whether the prisoner was sane or insane at the time. Dr. Pritchard Davies had examined the prisoner on behalf of the Treasury and had arrived at the opinion, on grounds that they would probably consider satisfactory, that at the time of the murder the mind of the prisoner was a complete blank. The witnesses were then called. There was not the slightest evidence that the prisoner had ever had an epileptic fit. He had fainted several times, but he suffered from severe heart disease. Dr. Kerry, who had attended him for heart disease, had never heard that he had had a fit. Prisoner's brother, who had slept in the same room with him for three years, had never known him have a fit. Dr. Davies thought that he had actually witnessed the occurrence of a fit, but all that he observed was that the prisoner on one occasion, after the murder, and after the injury to his head, stopped for a moment in the middle of a word, and then completed it. The prisoner had stated that he could remember taking the milk in, and that after that, the rest was a blank to him until he found himself lying by the roadside and heard the doctor say "Pour some water over his head." The judge summed up very fairly, and as appears from the report, without insisting on the strict formula of the law, and the jury found the prisoner guilty but insane.—Maidstone Assizes (Mr. Justice Mathew).—*Kent Messenger*, January 28th.

It is usually a most difficult task to get a jury to entertain the possibility of the occurrence of post-epileptic automatism. In the case above described Dr. Pritchard Davies triumphantly succeeded in getting the jury to accept the hypothesis that this murder was committed during post-epileptic automatism, and succeeded in spite of the facts that the judge was strongly opposed to the hypothesis, that there was not one jot of evidence to support it, and that all the probabilities of the case were against it. Not only was there a total absence of any evidence that the prisoner had ever had a fit in his life; not only was the evidence of the policemen absolutely conclusive against the hypothesis that the crime was committed unconsciously; but the circumstances of the crime itself were such as to make it altogether incredible that

it could have been so committed. What are the phenomena of post-epileptic automatism? They are that the automaton performs an act automatically; that is to say, he does some act *which he is in the habit of doing*, and, the act being done without the guidance of intelligence, is imperfect, is inappropriate in some of its particulars, is unadjusted to the circumstances; is a caricature, more or less faithful, of the habitual act. If the automaton finds in his hand some instrument that he is in the habit of using, or something having a similarity, even remote, to such an instrument, he proceeds to go through the movements of using that instrument and may commit damage through using the instrument inappropriately. A woman is seized with a fit while cutting bread. She goes on using the knife, but instead of cutting the bread she cuts her arm, or her child's arm. A soldier has a fit while his rifle is his hands, and he loads and discharges it at random, and so forth. How does the theory fit this case? There was no evidence that the man had ever fired a revolver before in his life. There was no evidence that he had the revolver in his hand when he was standing at his door. If he had, and if he were then seized with a fit, he might have discharged the revolver at random, and if he were accustomed to use it, this is doubtless what he would have done. But this is not what he did. He ran after the party, pushed the companions on one side, selected his victim, placed the revolver to her head, fired two shots at her, and then one into his own head. Unless it is contended that the prisoner was in the constant habit of shooting his sweetheart and then himself through the head, the hypothesis of post-epileptic automatism cannot possibly be sustained for a moment. Dr. Pritchard Davies's success, in getting the jury to accept this hypothesis in the teeth of the constable's evidence, in the teeth of the judge's summing up and in the teeth of the probabilities, nay, of the possibilities of the case, was marvellous, and disposes for ever of the statement, so often repeated, that the evidence of medical witnesses on behalf of murderers does not receive the consideration that ought to attach to it.

The case of Allan MacCallum.

(Reported by Dr. Keay.)

Allan MacCallum was born near Fort William over 40 years ago. He had at least two insane relatives—maternal cousins. His people are gamekeepers, and when he grew up he followed that occupation. In youth and early manhood he was looked upon as a decent enough fellow, but he was restless and unsettled, never keeping a situation long and always moving from place to place. He enjoyed good health and did not drink to excess. In 1887, in one of his restless moods, he went with three other young men to Patagonia as a shepherd, and he remained there four years. He led in Patagonia an active, open-air life, but a very lonely one. After he had been there three years he began to be troubled by headaches, which he attributed to the effect of the sun and to exposure in sleeping out at night. The pain was practically confined to the left side of the head and face. He states that he also had singing in the ears, and that sometimes when he lay awake at night he imagined that he heard voices calling to him, although he well knew that there was no human being within miles of him at the time. The headaches, &c., became so bad that when he had earned sufficient money he decided to come home for a year to have them treated. On the voyage home he took stimulants and at first found great relief. When he came home he had bouts of excessive drinking, and owing to this he lost his situation and did not return to Patagonia. For two years he, to use his own expression, "went to the bad." The pains came and went, he had drinking bouts, he pulled himself together again and found employment as an under keeper, but just as before he was unable to remain in any situation long. In 1893 he went to Rosehall in Sutherlandshire as an under keeper, and when there he had what was doubtless an attack of insanity. He shut himself up in his cottage and darkened the windows. He sat brooding over the fire, did not go to bed, and did not take food. He discharged his gun several times in the house. Then he took to wandering alone in the woods until he heard voices calling to him about his soul, when he returned to the cottage and sent for the minister. The head keeper wrote to the inspector of poor informing him of MacCallum's condition, but the acute symptoms passed off and he was not certified. A brother of his was sent for, and MacCallum left the situation and went to live with him. Then family quarrels arose, MacCallum did no work, wandered about aimlessly, was moody and sus-

picious and threatened his mother and brother with violence. The brother was alarmed at his conduct and called in the local doctor to see him, with the view of having him sent to an asylum. The doctor, however, was unable to satisfy himself as to the insanity, but gave him good advice, and warned the friends not to interfere with him and to keep all firearms out of his way.

MacCallum was much annoyed at the doctor's visit and left the house. He went to lodge with a widow at Nethy Bridge. The widow had a daughter by whom MacCallum had children. He is said to have treated her badly at times. At Nethy Bridge MacCallum led the wild lawless life of a professional deer poacher, and became well known to the watchers and police. He was looked upon as a sour, ill-tempered, passionate and reckless fellow, with whom it would be dangerous to interfere. He was, however, apprehended by the police on several occasions and fined for poaching, and once he underwent a sentence of twenty-one days imprisonment for the same offence, as on that occasion he was unable to raise the money to pay the fine.

On 20th December last Constables King and Macniven, of the Inverness-shire constabulary, had orders to apprehend MacCallum for the non-payment of a poaching fine. After searching and waiting about near his lodging, Macniven encountered MacCallum out of doors, and the constable states that MacCallum threatened to shoot him. At any rate, the constable did not arrest him, but retired. In the afternoon, as night was falling, the constables were informed that MacCallum had entered the house where he lodged. They at once went there and entered, one of them going to the room on the right and the other to that on the left. Macniven found himself in an unoccupied room, but King entered the room in which MacCallum was. There was immediately the report of a gun, and King fell shot through the heart. In the darkness MacCallum escaped in his stocking soles. He succeeded in evading arrest for a few days, but was eventually captured and lodged in Inverness Prison.

I was requested by the Crown authorities to visit and examine MacCallum, so as to be able to report as to his mental condition; and therefore I saw him on five occasions and spent a considerable time with him. From his appearance, manner, and conversation I formed the opinion that he was a man of distinctly neurotic temperament. He had more than average intelligence for one of his class. He could not be called frank and communicative, but conversed readily enough. He complained of more or less continuous pain of a neuralgic character of the left side of the head and face, and along the course of both sciatic nerves. I reported that he was, in my opinion, quite sane.

MacCallum's account of the events of 20th December was that on the day in question, learning that the police wanted him for the unpaid fine, he tried to keep out of their way, as he had not the money and wished to keep out of jail. In the forenoon, however, he was suddenly accosted by Constable Macniven, who asked him if he intended to pay the money (*£2 17s. 6d.*). He explained to the constable that he could not pay that day, but that if given time he would send the money in instalments, as he had been allowed to do on former occasions. He stoutly denied that he threatened to shoot the constable; but explained that as they talked he was standing several yards from the constable and on higher ground, so that as he held the gun under his arm it might possibly have pointed in his direction. Towards evening he returned to the house cold, wet, and tired. Having entered the room, in which there was no light save that from a bad fire, and bolted the door, he kicked off his shoes to warm his feet and stood in front of the fire, drying his gun the while with an oily rag, as was his custom the first thing on returning to the house. The gun being a muzzle loader he did not unload, nor did he take off the percussion cap because it was not his habit to do so. He explained that in drying the lock of the gun he would necessarily raise the hammer to full cock. While thus occupied he heard footsteps coming quickly to the house, and some person entered and tried to open the door of the room in which he was. He turned from the fire and walked towards the door, placing the gun under his arm and calling out "Who is there?" At this moment the door was burst open and a man rushed in. MacCallum felt that something came in contact with the gun—whether the man caught the barrel or merely came against the muzzle he could not say, but at any rate the gun was accidentally discharged. MacCallum being frightened and not knowing what had happened, lost his head, threw down the gun and bolted. He says it was not until

the second day afterwards that he was told that the man who came into the room was Constable King, and that he was killed by the shot.

MacCallum was charged with, 1st, threatening to shoot Constable MacNiven; and 2nd, the murder of Constable King. The medical witnesses were agreed that he was not insane when in prison awaiting his trial, and that there was no evidence to show that he was insane on 20th December. Counsel for the prisoner had two strings to his bow: 1st, that the shooting of the constable was accidental; 2nd, that the prisoner, though not perhaps actually insane, was naturally a nervous, excitable, morbidly impulsive person with a bad heredity, whose mind had been weakened by one or more attacks of insanity, and by his mode of life, and who therefore could hardly be accounted as altogether responsible for his actions.

MacCallum was by a majority found guilty of manslaughter, and he was sentenced to fifteen years' penal servitude. The verdict was not unexpected, but the sentence has been generally regarded as very lenient, and is said to have been a pleasant surprise to the prisoner.

It may be noted that in the examination of one of the medical witnesses the judge asked what "mania" the prisoner had suffered from when at Rosehall. The witness said he would call the disease melancholia and not mania. The judge then asked, "Melancholia is not mania?" His lordship seemed to regard the terms "insanity" and "mania" as synonymous, and to look upon melancholia as a milder or less serious disease hardly amounting to insanity at all.

FIRES IN ASYLUMS.

We regret to note that two serious fires in asylums have occurred during the last quarter. At that which occurred at Flower House one of the patients lost his life; and at that which occurred at Aberdeen, in the asylum laundry, but for the prompt and gallant conduct of the Assistant Medical Officers, Drs. Matthews and Moir, there would also have been a fatal issue. Dr. Mercier was aroused at 3 a.m., and at once telephoned for the fire brigade, but the arrangements of the telephone company were so imperfect that it was nearly an hour before the engine and escape arrived. Most valuable time was frittered away, great damage was done, and a life was lost under circumstances which were peculiarly distressing. The patient was placed in safety by Dr. Mercier, but went back into danger to secure his belongings, and so was overcome and perished. The coroner's jury expressed their opinion as follows:—"That much valuable time might have been saved if the operator of the National Telephone Company at Bromley had been instructed to communicate direct to the London Fire Brigade." When a company persuades the public to subscribe to their system, as the National Telephone Company does, specially to combat the dangers of fire, it is nothing less than scandalous that their methods are so imperfect. The result to Dr. Mercier was infinitely worse than if he had never leant upon that broken reed.

SUICIDE BY SWALLOWING A SPOON.

An unusual cause of death was the subject of a coroner's inquest at Hanwell Asylum on the 24th December. The patient was a woman labouring under delusions of various kinds, but she was not regarded as suicidal. Dr. Lord, who was in the ward at the time, was summoned by a nurse, who told him that the patient had swallowed a spoon. It was removed with some difficulty, the bowl of the spoon having been wedged in the œsophagus, and the top behind the soft palate. There was considerable injury and inflammation, consequent upon the force used by the patient, and she died of exhaustion and diarrhœa. The coroner drew attention to the fact that there had only been two cases of suicide in Hanwell Asylum

during the past twenty years, and the jury returned a verdict of " Death from Misadventure."

CRIMINAL ANTHROPOLOGY.

The Italian Chamber of Deputies have passed the second reading of the Government Bill relating to habitual criminals. High praise was given to the late Dr. Bruce Thomson in the course of the debate. The present penal system was unsparingly denounced, and large hopes of social improvement were held out consequent on the operation of the new law. The incidents and observations of the last three years, together with this action on the part of Italy, will afford material for discussion at the International Congress of Criminal Anthropology which is to be held at the Hague in August next.

CRIMINAL LUNATICS IN ORDINARY ASYLUMS.

Lord Sandwich, at a meeting of the Huntingdonshire County Council, lately referred to the case of a man named Clifton, who had been tried for attempted murder, but was ordered to be detained during Her Majesty's pleasure. Clifton would have been sent to Broadmoor, but it was full, and the only alternative was to send him to the Three Counties Asylum. There was no reason to consider him dangerous, but only of weak intellect. Clifton managed to get amongst the stream of patients going out at one door when he should have gone out at another. He had never since been heard of. It was impossible to prevent a recurrence of this, because the whole principle of the care of lunatics was that they should be subjected to as little restraint as was possible. A caution had, however, been given to the attendants that a more careful watch should be set on those who were suspected of homicidal mania, or were dangerous to themselves or others. Beyond that it was impossible to go, except by such an increase of staff as would necessitate a total reorganisation and a reconstruction of the asylums throughout the country. If pressure was put on the Government, and they could see their way to provide more accommodation for criminal lunatics of this character, it would be the best way to prevent such escapes. Lord Sandwich moved that the attention of the Home Secretary be called to the matter, and this course was agreed to.

We trust that this case will cause some decided action on the part of the Government, for it has long been evident that such patients are unsuitable for ordinary treatment, and detrimental to the interests of their fellows in county asylums.

LUNACY IN COUNTRY DISTRICTS.

Dr. Bowes has issued a most interesting report on the existing high rate of lunacy in Wiltshire.

The first question discussed is whether the apparent increase of insanity in England is real or only due to accumulation of the chronic insane and the removal of many quiet dements from their homes and asylums. Dr. Bowes agrees with the general impression that there is some increase, but not enough to create alarm. He points out that there is a much larger proportion of insane to sane among the agricultural labourers than among miners and city dwellers. He shows that for thirty years the agricultural counties have shown most pauperism and most insanity. He thinks that marrying in and the poorness of the living and generally depressing vital conditions account for this. All this is true, but we believe that it is true also that the more feeble are left in the country to breed degenerates and to live from hand to mouth. The morally weak as well as the mentally feeble tend to collect

in out-of-the-way places. A larger proportion of insane are now treated in asylums in Wilts than formerly, but at the same time, more are kept at workhouses and at home than in the more active centres. Dr. Bowes gives most careful tables analysing the causes of insanity, and he shows that in such counties as Wilts heredity plays a very marked part.

HOSPITAL PHYSICIANS AND ALCOHOLISM.

At the meeting of the Hospitals Medical Society, Paris, held last December, M. Legendre, alarmed by the ever-increasing amount of drunkenness, asked if it would not be possible to withstand this by means of meetings, insistence on the dangers of alcohol, and by what he considered an even better method, that of getting up for the instruction of patients lantern shows with exhibitions of anatomical preparations to show the dangers of alcohol. M. Legendre has had printed for the use of all his patients a little leaflet setting forth in the clearest manner the evils which follow the use of alcohol. He gives one of these to every patient of his both on admission to hospital and when he is discharged. Besides this, he has had them stuck up all over his wards and even in the lavatories as being quiet places where the patients will have leisure to read them with the object of bringing about a veritable obsession against alcohol. The text runs as follows :—" Most of the diseases treated in the hospitals arise from alcoholic drinks,—that is to say, they are either caused or aggravated by the abuse of alcohol. All alcoholic drinks are dangerous, and the most harmful are those which contain aromatics in addition to alcohol—as, for instance, *absinthe* and the so-called aperients called *ainers*. Alcoholic drinks are more dangerous when taken on an empty stomach or between meals. A man necessarily becomes an alcoholic, *i. e.* slowly poisoned by alcohol, even if he never gets drunk, when every day he drinks alcohol in the form of liqueur or too much wine, more than one litre per diem. Alcohol is a poison, the habitual use of which destroys more or less quickly, but none the less certainly, all the organs most necessary to life—the stomach, the liver, the kidneys, the blood-vessels, the heart, and the brain. Alcohol excites man, but does not strengthen him. It is no substitute for food, but takes away the taste for it. Those who often drink alcohol or too much wine (more than one litre a day) are much more liable to illness, and when ill are much worse, for the disease is often complicated with fatal delirium. Alcohol is a frequent cause of consumption by its power of weakening the lungs. Every year we see patients who attend the hospitals for alcoholism come back some months later suffering from consumption. Fathers and mothers who drink often have children who are deformed or idiots or who die from fits."

THE "ASYLUM NEWS."

The Asylum Workers' Association is rapidly increasing in members and importance. At the annual meeting of last year Sir James Crichton-Browne took the chair, and delivered an eloquent address which marked a new epoch in the practical outcome of his revered father's aims and labours so many years ago. This year also sees Sir James Crichton-Browne in the presidential chair, and we rejoice that the Association is honoured with his active co-operation. The dignity and importance of the work is gaining due recognition, and we must congratulate Dr. Shuttleworth on the results of his generous labours and assiduous attention. We cannot but quote a passage from the *Asylum News* for March 15th, which bears the impress of his hand and clear brain. Some such declaration is certainly called for while the *Hospital* persists in unfair criticism of a scheme which ought to be adopted in other departments of the nursing profession. The editor of the *Asylum News* says: " It seems to us that one uniform system of examination for nurses and attendants throughout the Kingdom is on many grounds to be preferred to individual asylums examining and certifying their own employés. We know that

good work has been done in this way at Northampton and other asylums, and possibly the Medico-Psychological Association may profit by incorporating into its own scheme some of the methods proved useful at these institutions. In order, however, to maintain an uniform and sufficiently high standard of training and acquirement, it is desirable that a central authority, such as the Medico-Psychological Association, should have the control of examinations, and we are glad to hear that in the near future 'all questions will be set by specially appointed examiners, who will also read and assess the replies from every asylum, and in this manner the risk of variation of standard at different asylums will be obviated.'"

LABORATORY OF THE SCOTTISH ASYLUMS.

The report of the General Board of Management has now been issued, signed by Dr. Yellowlees, the chairman. We are glad to note that the financial condition of the institution is satisfactory, for the successful issue of this scheme will induce other parts of the country to go and do likewise. The Board rightly bestow high praise upon the services performed by Dr. Ford Robertson, whose annual report has also been circulated. He refers to his work in original research, which has been already in part placed before our readers, and acknowledges various gifts made to the Laboratory. Dr. Robertson also has a word of praise for other workers who have assisted him during the past year, and notes the appointment of Dr. David Orr as pathologist to the Prestwich Asylum. We understand that Dr. Ford Robertson has in preparation a *Text-Book on the Pathology of Mental Diseases*, and shall await its issue with keen expectation. As it will be fully illustrated with expensive plates we trust that the members of the Association will do their best to subscribe for the limited edition to which it must be restricted. The price has been fixed at fifteen shillings net, and orders may be given to Mr. Clay, Publisher, 18, Teviot Place, Edinburgh.

"LUNATICK ASYLUMS."

The *Lancet* says:—"We have received a small pamphlet bearing the above title. The sub-title is 'An Essay by a Doctor of Arts, Oxford.' The degree is one we are not familiar with, and if conferred by any university it is certainly not so by the University of Oxford as would seem to be implied. The writer's argument would seem to be shortly that (1) asylums are too palatial and luxurious; (2) that weak-minded persons should be treated in separate establishments, however small and homely; (3) that there should be no private madhouses; (4) that asylums are conducted on the lines made familiar to us by such works as 'Valentine Vox' and 'Hard Cash;' and (5) that 'into these establishments the young and unfortunate are trepanned—magisterial warrants not even solicited— . . . .' That the 'over wrought' should be tended in a home something resembling the best kinds of almshouse is an idea with which we can all agree, but that the modern lunatic asylum is anything like the institution which a 'Doctor of Arts' describes or that Lunacy Commissioners neglect their duty, as he implies, is absurd."

We reproduce this to show that our critics are still on the alert, and that some of them are as unreasonable as ever. Lately, as reported by the *Hospital*, on the opening of a new building at Lewisham Infirmary for the reception of insane patients, the Chairman of the Board of Guardians "compared private asylums with those supported by the public purse to the disadvantage of the former, because it was profitable to the former to retain their patients as long as possible,' &c., &c. Our readers will not be surprised to hear that Dr. Toogood followed with the opinion that incipient lunacy is better treated by general practitioners than by specialists, because "often physical causes lay at the root of mental disturbance, and with the healing of the body the mind recovered its balance," and so on. It was evidently

too good an opportunity for cheap and sophistical oratory to be missed. The idea of specialists treating a 'physical cause!' Why they will claim equality with the general practitioner next. And yet, when the Toogoods of this world fall into ill-health, mental or physical, we find them knocking at the doors of those whose specialised skill and experience have brought them repute.

A NEW JOURNAL.

Our esteemed colleague Dr. Bresler is about to produce a new journal, entitled *Psychiatrische Wochenschrift*. Although there is already a large number of periodicals dealing with mental diseases in Germany, Dr. Bresler hopes to find a public for yet another. We are assured that, if energy and capability can command success, Dr. Bresler will make this new journal widely popular in our department of medicine.

CORRESPONDENCE.

From Dr. Aldous Clinch.

It is with the greatest diffidence that I make the following comment on the work of one who is held in high esteem, but it appears to me that by withholding it confusion and error might arise.

Dr. Ireland, in a paper in the *Journal of Mental Science* of January, 1898, in another in January, 1899, and in the new edition of his book on the *Mental Affections of Children*, frequently indicates how tracts in the nervous system have been worked out by studying the time of development of what he calls in some parts the *axis-bands*, and in other parts the *axis-cylinders*.

I have referred to Flechsig's original article in the *Neurologisches Centralblatt*, and find that the word translated as axis-band or axis-cylinder is "*markscheide*." The usual translation of this is medullary sheath, or white substance of Schwann.

The axis-cylinders are developed at a very early stage, whereas their separation and insulation by the medullary sheaths occurs at a very late stage of development, and is not complete till after birth. By the study of the medullation, and not by the study of the development, of the axis-cylinders, has Flechsig succeeded (to a disputed extent) in analysing that labyrinth of tracts, by means of which nervous impulses correlate our acts to our sensations.

From Dr. Ireland.

As Dr. Clinch has pointed out, in the *résumé* of Professor Flechsig's researches I have given a wrong translation of the German words *Mark* and *Markscheide*. I had hurriedly supposed that *Mark* was used for the axis-cylinder, and *Scheide* for the medullary sheath or myelin, and thus I slipped into a loose rendering of Flechsig's view of the import of the development of the nerve fibres, which I much regret, and which I now endeavour to correct.

Kölliker, in his *Microscopische Anatomie*, p. 6, thus defines these terms: the *Markscheide* or the *Nervenmark*, the *Myelin* or the *Myelin Scheide* of authors; by these names are indicated the contents of the dark-edged nerve-fibres lying between Schwann's sheath and the axis-cylinder. This myelin is distinguished by its softness and great changeableness, and has been the occasion of much difference of opinion.

Markhaltige-faser means a nerve-fibre which has got to that stage of maturity that the axis-cylinder is covered with the medullary sheath. Flechsig has succeeded in colouring the myelin with logwood, so that in his preparations of the brains of new-born children the ripe nerve bundles appear as blue tracts amongst

the uncoloured unripe strands, which are pellucid, like glass. The professor assumes that the naked axis-band is not yet capable of its function, and thus its clothing with the myelin furnishes him with a key to some of the functions of the brain. We are told in a *résumé* of a paper entitled *Nervenmark und Axencylinder*, by Professor Neumann, of Königsberg (*Neurologisches Centralblatt*, No. 15, 1898), that whilst Henle still holds that the axis-band and medullary sheath cannot be separated, and that the drop which can be pressed out of the cut fibre comes from its collective contents, Kölliker believes that this oozing matter consists solely of myelin. Neumann found, by careful pressure upon the fibres, and by colouring, that this ooze was made up from both the medullary sheath and the axis-cylinder.

THE NEW MASTER IN LUNACY.

The vacant appointment of Master in Lunacy has been given to William Ambrose, Q.C., whose long legal and other experience eminently qualifies him for the post. Mr. Ambrose has been a Queen's Counsel since 1874, and Attorney-General of the Duchy of Lancaster from 1895. His appointment to his present position renders vacant the Harrow Division of Middlesex, which he has represented in Parliament since the last General Election.

OBITUARY.

John Hayball Paul.

John Hayball Paul, M.D.St. Andrews, F.R.C.P.Edin., M.R.C.P.Lond., F.R.C.S.Eng., &c., &c.

The death of Dr. Paul in his eighty-fourth year removes from the roll of the Medico-Psychological Association one of the four remaining members who joined prior to 1855. He was for very many years the most regular attendant at our meetings, and when in 1895 he resigned the post of Treasurer, which he had held for thirty-one years, he received from the hands of the President for that year (Dr. David Nicolson) a handsome silver bowl and an illuminated address on behalf of the members, testifying to the affectionate regard in which he was held, and setting forth the many services so faithfully and so zealously rendered to the Association. Few, however, but those of the older members know how deeply indebted the Association is to Dr. Paul. In the days now long gone by, when money was scarce and members few, the Treasurer of the Association practically kept the Association and its Journal going by the generous expenditure of considerable sums which he never mentioned. But it was then well known when he rose at the Annual Meetings to present his balance sheet that the satisfactory accounts he used to render showing that income and expenditure were so well balanced were to some extent due to his taking his own money out of one pocket and putting it into the pocket of the Association. After thirty-one years' service, when he retired from office, he was deeply gratified when, by the unanimous voice of the members, he was elected Emeritus Treasurer, so that his name was retained on the list of officers of the Association. Dr. Paul was born in the Isle of Wight on January 1st, 1816, and he commenced his professional career in the usual way then, by becoming apprenticed to a medical man, Mr. Newington, a surgeon who practised in Spital Square, E.C. He completed his medical curriculum at Westminster and St. Bartholomew's, qualifying as M.R.C.S. in 1840, and L.S.A. in 1845. In 1854 he graduated M.D. St. Andrews. In 1888 he was elected F.R.C.P.Edin.; and in 1859 he took the M.R.C.P.Lond. and F.R.C.S.Eng. Dr. Paul opened Camberwell House Asylum in 1846, and continued his connection with that institution until his death, which occurred on January 29th last, and he was buried in Nor-

wood Cemetery on February 2nd. His end was no doubt accelerated by the unexpected death of his wife, who departed this life on October 18th of last year. After a married life of over half a century the loss of his wife to whom he was so devotedly attached was a fatal blow to his already enfeebled frame, and he never rallied afterwards.

The Medico-Psychological Association was not the only institution in which he was interested; together with the late Dr. Arthur Hill Hassall he was one of the pioneers and life governors of the Ventnor Hospital for Consumption. He was also a life governor of Bethlem Hospital, of the Medical Benevolent College, Epsom, and the Institution for the Blind, &c., &c.

Dr. Paul was a wealthy man who dispensed charity with a liberal hand, he was always a kind, sympathetic friend, considerate and courteous to all, an honourable and upright man in all his dealings, whose chief delight was in doing good to others. Truly no man carried out more conscientiously than he did brotherly love, relief, and truth, the maxim of the Masonic body, of which he was a distinguished member. He left an only daughter.

T. O. W.

Sir John Nugent.

Sir John Nugent, who was Inspector of Lunatic Asylums in Ireland for between forty-two and forty-three years, died at the St. George's Club, Hanover Square, London, on January 26th, 1899. For a very long period he was a very prominent figure in lunacy administration in Ireland, and was well known to all the senior members of our specialty in that country. Though a good hater he was also capable of being a warm friend, and, as he was a man of great vigour of character and some originality, his personality was an important item in the current history of what should have been a great period in the development of the lunacy service in his country. Unfortunately he was one of those men in whom high and low tones are so intermingled as to produce a discord. His personal courage, which was of an eminent order (and needed to be, that it might carry him through many things which he undertook), was dashed with a spirit of wanton rashness and with a perfectly pithecoid love of mischief: his subtlety, which was considerable, degenerated, perhaps under the disadvantages of a youth spent in the atmosphere of politics and a middle age passed in that court of which Thackeray had so poor an opinion, into a love of intrigue for intrigue's sake, such as deprived him of the moral weight which his position and talents should have given him. His subtlety, wire-drawn in later years, together with a natural defect in his powers of expression, which were not developed in proportion to his other capabilities, gave rise to the peculiar complicated and contradictory style of his official reports, which made the *Irish Lunacy Blue Book* for some generations more amusing than instructive.

During Dr. Nugent's tenure of office twelve district asylums and one criminal asylum were built in Ireland. None of these nor the alterations made during the same period to the older asylums seem to indicate any special ambition on the part of those who were responsible either to be in front of any movement then going on or to strike out a new course.

The following notice from the Dublin *Daily Express* of the 28th January briefly epitomises the aims and the successes of the life of this distinguished Irish official: "Sir John Nugent died on Thursday at the advanced age of ninety-four, from bronchitis. Educated in Clongowes College, of which he was one of the earliest pupils, and Dublin University, he became the travelling physician of Daniel O'Connell, and, with him, an original member of the Reform Club. In the later thirties he was intimate with Thomas Moore and the other celebrities of the time. In 1847 he was appointed Inspector-General of Lunatic Asylums in Ireland, an office he held until 1890. This post brought him into connection with most of the nobility and gentry of Ireland, and few Irishmen during the present half-century became so universally known. He was highly appreciated as a raconteur, and had excellent artistic knowledge, which enabled him to collect proof engravings of remarkable value. His eldest son is an acting member of the Council of Bombay."

More recent Dublin newspapers again notice Sir John Nugent in connection with his will. His personal estate was valued at over £38,000 (a good deal of money in Ireland), and his will appears to have concluded with an expression of his conviction that he had never intentionally, by word or deed, injured a fellow-

creature. It would seem superfluous to utter the customary kindly wish for peaceful repose over one who cherished so comfortable a conviction, especially when we remember how long a period he had to look back upon during which he was in a position where carelessness or injustice might have caused him to inflict such grievous injury upon many of his fellow-creatures.

NOTICES BY THE REGISTRAR.

The following candidates were successful at the Nursing Examination held in South Africa in November, 1898.

Grahamstown Asylum.—Males: Frederick E. Martenson, Charles Watkins. *Females:* Rose Whitfield.

Valkenberg Asylum.—Males: Edward Durkan. *Females:* Susan Retief, Mary Walker.

The next examination for the Certificate in Psychological Medicine will be held in July, 1899.

The examination for the Gaskell Prize will take place at Bethlem Hospital, London, in the same month.

Due notice of the exact dates will appear in the medical papers.

For further particulars respecting the various examinations of the Association, apply to the Registrar, Dr. Spence, Burntwood Asylum, near Lichfield.

NOTICES OF MEETINGS.

Medico-Psychological Association.

General Meeting.—The next General Meeting will be held in the rooms of the Association, 11, Chandos Street, London, W., on Thursday, 11th May, 1899.

Northern Division.—The Spring Meeting will be held at the County Asylum, Hatton, near Warwick, on Wednesday, 12th April, 1899.

South-Western Division.—The Spring Meeting will be held at the Grand Pump Room Hotel, Bath, on Tuesday, 18th April, 1899.

British Medical Association.

The sixty-seventh Annual Meeting will be held at Portsmouth, Dr. John Ward Cousins being President-Elect. Section of Psychology—President, David Nicolson, C.B., M.D.; Vice-Presidents, S. R. Macphail, M.D., P. W. Macdonald, M.D.; Hon. Secretaries, J. Neil, M.D., and B. W. Mumby, M.B.

APPOINTMENTS.

Earl Waldegrave has been appointed an Honorary Commissioner in Lunacy in room of Lord Hatherton, resigned.

Branthwaite, R. W., M.D., has been appointed Inspector of Inebriate Institutions under the new Act.

Macpherson, J., M.D., has been appointed Commissioner in Lunacy for Scotland in room of Dr. Sibbald, resigned.

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JOURNAL OF MENTAL SCIENCE.

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Part I.—Original Articles.

Seven Hundred Cases of General Paralysis of the Insane; being an analysis of all the cases which have occurred in the Glamorgan County Asylum from 1867 *to* 1896. By J. G. SMITH, M.D., Assistant Medical Officer, Glamorgan County Asylum.

AT the annual meeting of alienists, in Switzerland, in 1888, Wille directed attention to the writings of Felix Plater, who practised at Bâle nearly three centuries before, and in these writings are to be found the first definite descriptions of general paralysis; but it was not till after Willis in 1672, Haslam about 1800, and Bayle twenty years later, had each independently described the disease, that any great interest was awakened in it. Since that time, however, it has furnished a fruitful source of interest and discussion to many physicians, which has not only been abiding, but as the disease began to be better understood, has increased to a wonderful extent.

The large amount of attention which has been bestowed upon most of the prominent features of the disease, as is indicated by the numerous writings on the subject, both in this country and abroad, and the great variation not only in the results, but in the interpretations which have been put upon them by different observers—has led me to believe that an examination of the records of this asylum, bearing on the cases

of general paralysis, might throw some light on many of the features of the disease, and help—even if only by confirming the conclusions arrived at by other observers—in rendering more definite our knowledge of this now common but intensely interesting malady.

I am, of course, aware, that the records of one county may not indicate accurately the state of affairs to be found in others, but the fact that the district from which these cases are drawn includes the two great seaport towns of Cardiff and Swansea, in addition to a large industrial and agricultural area—attracting as they do such a varied population to the neighbourhood—would seem to justify the belief, that Glamorganshire is peculiarly suited to the purposes of such an investigation.

In order, therefore, to obtain sufficient data from which to review the matter under discussion, I prepared a set of tables—which it does not seem necessary to reproduce here—on which my conclusions are based, and showing particulars of each case as follows :

1. Year of admission.
2. Age at onset.
3. Age at death.
4. Condition as to marriage.
5. Occupation.
6. Assigned cause.
7. Existence or non-existence of hereditary predisposition.
8. Duration in years or months.
9. Occurrence or non-occurrence of congestive seizures, the period at which they appeared, together with a description of the attacks, and whether fatal or not.
10. Prevailing state of mental disorder.
11. Complications—bedsores, retention of urine, hæmatomata, pneumonia, phthisis, &c.
12. Termination.
13. Presence of a spastic or an ataxic condition.
14. Nationality.

The period under consideration is one of thirty years, 1867 to 1896 inclusive, and in some instances I have compared the results obtained by dividing that period into three decades.

Proportion of G.P.'s to the Total Admissions and their Distribution as to Sex.

Males.	Females.	Totals.	
3193	2649	5842	Total admissions.
574	128	702	G.P. „
18 per cent.	4·8 per cent.	12·3 per cent.	Percentage of total admissions.

The percentage of 12 as the total G. P. admission of both sexes is somewhat higher than usual, Mickle giving 7·8 per cent., though Arnaud gives the following :

1882	13·03 per cent.	1885	14·60 per cent.
1883	14·75 „	1886	15·45 „
1884	11·00 „	1887	19·50 „

The sex proportion of four males to one female corresponds with that given by Mickle, and calculated by him from the lunacy blue-books (comprising 54,000 persons). This may, therefore, be taken to fairly represent the condition of affairs, as indeed is done by most observers at the present time, though twenty years ago there seems to have been a great diversity of opinion on this point, Sander placing the proportion at ten and a half males to one female, while others put it even higher.

It is interesting to note that the disproportion between the numbers of the two sexes is less marked at the earlier ages than at the later, as will be seen from the following table :

Age.	Males.	Females.	Proportion.
Under 30	52	15	3·4 to 1.
30—39	273	64	4·2 „
40—49	189	34	5·5 „
50—59	51	14	3·6 „
60 and over	8	1	8 „

Comparing these results with those of other observers on this point, it is found that Doutrebent and Baillarger assert that the sexual disproportion becomes less after the age of forty-five, but the above figures show that this is only true of the ages 50 to 59.

To the occurrence of the menopause has been attributed by the above writers, the increase in the number of female G.P.'s

at the ages 50 to 60, and this seems to obtain confirmation from these figures, for, as is seen below, there is a greater disproportion between the percentages of G.P.'s at the ages 40 to 50 and 50 to 60 in the male than in the female.

Age.	Males.	Females.
40—50	29·7 per cent.	23·4 per cent.
50—60	8·2 „	10·2 „

Comparison of Results obtained by Dividing the same Period into three Decades.

1867—1876.

Males.	Females.	Totals.	
672	573	1245	Total admissions.
116	27	143	G.P. „
17·2 per cent.	4·8 per cent.	11·4 per cent.	G.P. percentage.
	3·5 males to 1 female.		

1877—1886.

Males.	Females.	Totals.	
911	737	1648	Total admissions.
136	27	163	G.P. „
15 per cent.	3·6 per cent.	9·8 per cent.	G.P. percentage.
	4·1 males to 1 female.		

1887—1896.

Males.	Females.	Totals.	
1610	1339	2949	Total admissions.
322	74	396	G.P. „
20 per cent.	5·5 per cent.	13·4 per cent.	G.P. percentage.
	3·6 males to 1 female.		

From the above it would seem that general paralysis has become more frequent during the last thirty years, both in males and females, but that males are chiefly responsible for this increase.

Age relation.—The mean age at onset of all cases of insanity—excluding general paralytics—admitted here during the thirty years, I find to be in males 39 years, and in females 39·2 years, and it has shown a tendency to become greater during that period, for it was only 38·4 years in males and 38·7 years in females, while for both sexes it was 38·5 years during the first decade.

Now, comparing these with the mean ages at onset of all general paralytics admitted during the same period, the results are as follows:

Years.	Males.	Females.	Both sexes.	
1867–76	38·6	38·0	38·0	Mean age in G.P.'s.
1877–86	38·3	37·3	37·0	
1887–96	38·9	37·0	39·0	
Totals	38·6	37·3	38·0.	

From the above it is seen that the mean age at onset of G.P.'s of both sexes is slightly lower than that of all admissions, excluding G.P.'s, but that, while male G.P.'s are slightly older than the other insane, female G.P.'s are somewhat younger.

It is also seen that male G.P.'s are older at onset than females, and have always been so since 1867, and that while the mean age of the males has shown a tendency to become greater, the mean age of females has become less.

Arnaud states that the mean age is lower than formerly, and Ritti also says that "the mean age of G.P.'s is progressively diminishing since the beginning of the century."

Age frequency.—The statement made by Mickle that general paralysis is found most frequently between the ages of 30 and 55, is borne out by the following table; at least, as far as regards the ages 30 to 50, for it is here seen that during the three decades the percentage of G.P.'s at these ages is over 30 per cent. of the total admissions at that age in the first period, and that it rises from over 33 per cent. in the second to 45 per cent. in the third, whilst if the age period 30 to 60 be taken the result is still more striking, 58 per cent. being the figure for the third period.

Ages.	Percentage of total admissions.		
	1867–76	1877–86	1887–96
20—30	3·7	4·3	5·4
30—40	20·6	20·4	22·6
40—50	10·8	13·0	22·7
50—60	5·5	10·8	12·7

Now, while the percentage of G.P.'s between 30 and 60 shows such an increase, that of G.P.'s at the earlier ages (20 to 33) also shows an increase, but not nearly to the same extent.

This would seem to support the statement made earlier, that the mean age is higher than formerly.

General paralysis in the young.—In a total of 702 cases only seven were under the age of twenty-five on admission. This corresponds with the returns in the blue books.

The youngest age at which a G.P. was admitted was 19, while there were two at 21.

Of those over 25 but under 30 there were 9·4 per cent. of the total admissions; this is higher than usual, the lunacy blue books giving 8·5 per cent.

General paralysis in the aged.—Of those over 60 there were nine, but only three can be called cases of typical G.P., the other six clearly being cases of ordinary paralysis associated with senile mental changes.

Arnaud saw three cases at 63, 64, and 67 respectively, and concluded that general paralysis tends to become more frequent after 60, but the records here do not support his assertion.

Marriage relation.—The table below shows order of frequency in married, single, and widowed G.P.'s in percentage of all cases admitted.

	Male.	Female.
Married	28·0	5·4
Single	7·3	1·9
Widowed	15·2	4·1

From this it is seen that the order of frequency is—

(1) Married males.
(2) Widowed „
(3) Single „
(4) Married females.
(5) Widowed „
(6) Single „

The married are most frequently affected in both sexes, and the single are least so. The same holds good for the three decades.

1867—1876.

	Males.	Females.	Totals.
Married	27·5	5·6	16·8
Widowed	18·8	4·3	9·0
Single	4·8	2·4	4·0

1877—1886.

	Males.	Females.	Totals.
Married	23·8	5·2	14·4
Widowed	10·0	3·0	5·5
Single	6·4	0·47	4·4

1887—1896.

	Males.	Females.	Totals.
Married	32·7	7·2	20·0
Widowed	17·0	5·1	13·4
Single	10·7	3·1	7·7

The above results correspond with those of Mickle.

Types of G.P.'s and their relative frequency.—The great majority of G.P.'s can, on examination, be divided into three great clinical types, according as the state of mental disorder can be described as one of dementia, mania, or melancholia, and these three conditions describe the mental state which prevails throughout the course of the disease in individual cases, that is, apart from the condition of dementia into which all, sooner or later, lapse.

I have therefore endeavoured to divide all the cases under consideration in this way, of course omitting all in which there was not a definite description of the prevailing mental condition.

Percentage of Different Types to Total G.P. Admissions.

Maniacs.	Dements.	Melancholics.
54·2 per cent.	40·0 per cent.	5·8 per cent.

Those of a maniacal type were therefore most numerous, and the melancholics were least so.

The question as to whether any change has taken place of late years in the relative frequency of the three types is answered by the following table.

	Dements.	Maniacs.	Melancholics.
1867–76	17·5 per cent.	13·8 per cent.	1·4 per cent.
1877–86	27·2 „	12·1 „	2·3 „
1887–96	43·2 „	11·3 „	1·24 „

Here it is seen that there has been a large increase in the

percentage of the demented type, and a decrease in the percentage of the maniacal type, both being calculated on the total admissions of the respective types.

The percentage of dements admitted of all classes of insanity has at the same time fallen from 18·2 per cent. (1867–76) to 12 per cent. (1887–96).

The conclusions which one would draw from the foregoing, therefore, are that the bulk of G.P.'s are characterised by a condition of mental exaltation, but that this type is becoming less frequent than formerly, the demented type replacing the maniacal form, and that it is this demented type which is responsible for the increased frequency of the disease.

Arnaud directed attention to the increasing frequency of the demented type (*An. Méd. Psych.*, July, 1888, p. 89) and the above figures would seem to show that the classical type is slowly but surely giving way before a rapidly increasing though not less interesting type, which is characterised by a condition of dementia occurring even at the beginning of the disease.

As to the cause of this increase, it does not seem improbable that the more common tendency nowadays than formerly for persons at that critical time of life when general paralysis is most apt to appear, to indulge in various excesses, but chiefly of drink and tobacco, may be held responsible, in some degree at least, for this remarkable change.

Charpentier, in 1890, stated that "early dementia is the rule in cases given to tobacco excess," and that "this occurs mostly in young subjects" (*An. Méd. Psych.*, Sept., Oct., 1890).

Duration.—The duration of general paralysis has been stated by different authorities to be a period varying from thirteen months (Calmeil, *Paralysie général des Aliénés*) to twenty-three months (Parchappe, *Recherches sur l'encéphale*, 1836, p. 155) in pauper patients.

In a total of 434 completed male cases I find the average duration to be 23·8 month whilst in 101 females it is 24·4 months, or in both sexes in 535 cases 24·0 months.

The male cases are therefore of shorter average duration than the female by 0·6 months, and though this corresponds with the results arrived at by others, the disproportion between the average duration in the two sexes is not so great in this county as in some others. For example, the *West Riding Reports* (vol. v, p. 202) give 20·7 months (male) and 25·9 months

(female), or 21·6 (both sexes); the difference being therefore 5·2 months. On the other hand, at the Devon Asylum (vol. i, p. 138) the male average duration was found to be as low as 15 months, and in females it was 27 months, the difference being no less than 12 months.

An estimation of the average durations in months during each of the three decades gives the following results:

	Male.	Female.
1867–76	25·3	22·2
1877–86	23·4	30·2
1887–96	22·7	23·0

The average duration has, therefore, become somewhat shorter in males and somewhat longer in females. This would seem to receive confirmation from the fact—shown by the table below—that there has been an increased percentage of male cases dying under three years' duration, during the three decades, with a corresponding decrease in the percentage of those dying after more than three years' duration.

	First.		Second.		Third.	
Under 1 year	11·2	per cent.	16·9	per cent.	18·13	per cent.
„ 2 years	32·4	„	34·3	„	43·30	„
„ 3 „	19·8	„	22·01	„	25·27	„
„ 4 „	12·9	„	9·5	„	8·7	„
„ 5 „	6·03	„	6·6	„	2·19	„
Over 5 „	7·75	„	4·4	„	3·29	„

Prolonged and short duration.—4·8 per cent. of each sex lasted over five years. Three cases died under four months.

Heredity and duration.—In those in whom hereditary predisposition was said to have existed, the average duration was 24·6 months for males, and 25·5 months for females, or 25·0 for both sexes; whilst in those who had no hereditary taint the duration in males was 23·2 months, in females 24·1 months, and in both sexes 24·0 months.

This, therefore, agrees with Mickle's statement "that hereditary cases with their greater tendency to long remissions are often of prolonged duration." Dr. Lionel (*Nouv. Dict. de Méd. et de Chir. prat.*, 1878, p. 123) held similar views.

Condition as to Marriage in Relation to Duration.

	Male.	Female.
Married	24·5 months	26·6 months
Single	22·6 „	24·7 „
Widowed	18·7 „	22·1 „

Therefore, longest in married females, and shortest in widowed males.

Influence of congestive seizures on duration.—In a total of 319 G.P.'s who had convulsions before or after admission the average duration was 24·4 months, whilst in those admitted during the same period who had no seizures of any kind it was 23·4 months ; so that, contrary to the common belief that G.P.'s in whom congestive attacks occur are shorter lived than those who never have them, it is seen that the very opposite is the case. Dr. C. F. Newcombe (*West Riding Reports*, vol. v, p. 198) found the same thing.

Relation of the type to duration.—In the insane generally it is found that cases in which dementia is the form of mental disorder, run a very prolonged and chronic course, as a rule, and it may be for this reason that G.P.'s of the demented type are believed to run a similar course, but in 500 cases the average duration of those belonging to the demented type I find to be exactly the same as that of those belonging to the maniacal form, *i. e.* 24·5 months, whilst in the melancholic type it is 24·6 months.

Relation of Age at Onset to Duration.

Age at onset.	Average duration.
Under 30	26·1 months.
30—39	23·1 „
40—49	22·0 „
50—59	18·0 „

The earlier the disease begins, therefore, the longer it lasts ; and as the age at onset increases the duration is correspondingly shortened.

Influence of the cause on duration.—By considering the duration of the cases due to the various causes under the usual subdivisions—moral and physical—it is seen from the table below, that those due to physical causes are of somewhat

shorter duration than those due to the moral, and that the cases which were said to have been caused by drink, are responsible for this shortening.

Assigned causes.	Average duration.
Physical, Drink „ Venereal	25·1 { 24·3 months 30·5 „
Moral	26·0

Relation of a spastic or an ataxic condition to duration.—In 241 cases in which spastic symptoms were described the average duration was 25·6 months, whilst in 44 cases with ataxic symptoms the average duration was 24·1 months.

Congestive seizures.—Of completed cases 61·5 per cent. male and 55·7 per cent. female had some form of congestive seizure during the progress of the disease, so that men seem to be more liable to them than women. As will be seen from the table below, congestive seizures seem to have been more common in women than in men in former years, but this state of affairs is now reversed.

Percentage of G.P.'s who had Convulsions.

	Males.	Females.
1867–76	46·7 per cent.	58·3 per cent.
1877–86	66·3 „	56·0 „
1887–96	67·4 „	54·3 „

With regard to the statement of Esquirol (*Des Maladies Mentales*, t. ii, p. 264) that G.P.'s had almost invariably convulsions setting in during the closing days, I find that in this county only 24 per cent. terminated in this way.

There seems to be an increasing proportion of men who die in consequence of the onset of convulsions, for there is an increased percentage in the third decade over the first, of these terminating in this way—12 per cent. being the proportion in the first period, and 18 per cent. in the third.

This increase cannot have a relation to the increased mean age during the same period, for the latter is but slight compared with the former.

In 28 per cent. of the male cases, and in 31 per cent. of the females the disease began with a convulsive seizure, so that women seem to begin in this way more frequently than men

whilst in both sexes congestive attacks were more frequent at the beginning of the disease than at the termination.

Influence of the age at onset on the occurrence of seizures.—From the table below it would appear that the age of incidence has a marked influence on the occurrence of convulsions, the latter tending to become less frequent the older the patient is at the onset of the disease.

Percentage of those who had Convulsions at the different Age Periods.

Age.	Percentage.
Under 30	65·3 per cent.
30—39	61·6 „
40—49	61·0 „
50—59	55·5 „

Relation of ataxia and spasticity to the occurrence of congestive attacks.—Spastic cases seem to be more liable to congestive seizures than those of a tabetic nature, for I find that in 241 spastic cases, congestive attacks occurred in 71 per cent., whilst in 44 of an ataxiform nature they occurred in 47·7 per cent.

Relation of congestive seizures to a state of dementia.—The question as to whether dementia—coming on at the beginning of the disease—is due to the occurrence of congestive seizures or not would seem to require an affirmative answer, for I find that of the cases which were said to have begun with epileptiform attacks 75 per cent. were of the demented type, whilst 65 per cent. of those in the exalted class began in this way.

Causation.—Of all the causes given as being responsible for the occurrence of G.P. the physical stand out as being by far the most prominent. Compared with the moral, the physical are in the proportion of over five to one, and drink accounts for more than half the percentage of the total physical causes.

Moral.	Physical.
6 per cent.	32 per cent.

In the insane generally the proportion of physical to moral causes is about five to one.

Now drink as a cause of insanity generally has increased from 23 per cent. in the first period, to 35 per cent. in the third ;

whilst drink as a cause of G.P. has only increased from 19·7 per cent. to 20·8 per cent., so that it does not seem to exert a marked influence in causing G.P.

Hereditary predisposition.—With regard to this question the following tables show the state of affairs.

Percentages of Admissions with Hereditary Predisposition who were G.P.'s.

1867–76	20·3 per cent.
1877–86	10·1 „
1887–96	7·5 „

Percentages of all admissions who had Hereditary Predisposition.

1867–76	8·2 per cent.
1877–86	15·5 „
1887–96	30·8 „

The conclusions to be drawn from the above tables may be several. The percentage shown may merely indicate more careful discrimination now than formerly of the cases in which H.P. was alleged, or they may show that causes other than H.P. are now at work in the production of the disease. This latter supposition would seem to receive confirmation from the fact that H.P. has become more common as a cause of insanity generally, than it used to be, as is seen from the second table, in which are shown the percentages of all persons admitted who had a history of H.P.

Continental physicians in dealing with this question, seem to be able to trace the existence of heredity in a larger percentage of the insane than is the case in this country; Barthomeuf, for example, finding a history of hereditary predisposition in about 15 per cent. of G.P.'s of both sexes.

Occupation.—The following table shows the result of separating all G.P.'s into two great classes:

1. Those who follow a more or less laborious calling—labourers, colliers, and tradesmen generally.

2. Those who use the brain more than the hands—accountants, musicians, chemists, clergymen, &c.

G.P. Percentages of Admissions in each Class.

	First class.	Second class.
1867–76	17·4 per cent.	7·5 per cent.
1877–86	14·4 „	15·6 „
1887–96	12·4 „	37·5 „

From the above it appears that formerly general paralysis was more common among the labouring classes than nowadays, and that it is among the better educated that the majority of its victims is now found.

Complications.—It is interesting to note how few G.P.'s have died of intercurrent disease, 10 per cent. only of those without convulsions dying of other complaints under the average of two years, whilst the great diminution in the number of cases in which bedsores occur is satisfactory from a nursing point of view, as is also the now less frequent appearance of hæmatomata.

Notes on Four Cases of Major Operations on the Insane.

By J. H. SPROAT M.B.Lond., Senior Assistant Medical Officer, Somerset and Bath Asylum, Wells.

G. D—, æt. 69, admitted September 21st, 1896, for the eighth time. He was maniacal on admission, and had remained so for twelve months.

In January, 1898, he commenced to complain of pain on micturition ; his urine was strongly alkaline and contained pus. He stated that two months previously he had inserted a piece of vulcanite pipe stem into his urethra. On passing a sound no foreign body was detected in the urethra, but a stone was felt in the bladder.

On February 1st supra-pubic cystotomy was performed, and a stone two inches long and one inch thick was extracted, and the piece of pipe stem was found embedded in it. In a fortnight the abdominal wound was quite healed and micturition normal ; he occasionally complained of lumbar pain, but this passed off, and he was discharged well mentally and bodily four months after the operation.

A. W—, æt. 46, admitted in July, 1895, suffering from a second attack of acute melancholia. She was very suicidal, and said that she was extremely wicked and ought to die. Nothing abnormal in her physical condition was noted on admission.

In April, 1896, she had retention of urine for about a fortnight, said to be due to "some prolapse with an anteflexion of the uterus."

In December, 1896, she became very profoundly depressed, having previously had some menorrhagia; she was anæmic, but well nourished and not losing weight. On palpation a tumour was discovered in the right iliac region extending just across the median line and almost as high as the umbilicus; it was roundish in contour, and felt fairly firm.

On January 11th, a month later, patient was operated on and a fibroid removed from the uterus, *per vaginam*, about the size of a fœtal head and weighing just under two pounds.

Patient's temperature remained normal after the operation, the uterus being syringed out and packed for ten days. Three weeks afterwards patient had regained her health, and was discharged recovered mentally six months after, having never shown symptoms of insanity after the operation.

M. M. D—, æt. 44, was admitted in June, 1897, for about the sixth time. Mentally she was acutely maniacal: physically she was healthy, but very stout.

On December 17th she complained of a sudden attack of pain in the region of the gall-bladder. She became slightly jaundiced and evidently suffered from biliary colic; this attack lasted for about a day.

A week later she complained of feeling ill, and her temperature rose in the evening to 102° without any definite physical signs to account for it. For five weeks her temperature ranged between 100° and 104°; and beyond occasional diarrhœa, with very light motions, there were no other abnormal physical signs; at the end of this time the temperature fell to normal, and remained so for about a fortnight, when it again rose and she complained of abdominal pain. On examining the abdomen a tumour was felt in the epigastrium a little to the right, about the size of a Tangerine orange; it was very tender. The next few days this tumour grew rapidly larger and fluctuation was detected: the temperature was still of a hectic type.

On February 11th, 1898, an anæsthetic was administered

and an incision made over the tumour. A large abscess cavity was opened containing about a pint of extremely fœtid pus. Above the cavity was felt the liver, and at the bottom the aorta could be felt pulsating, and below matted intestines. The abscess cavity was packed with iodoform lint, and the temperature remained normal for three days, when it suddenly rose to 104°: no fresh collection of pus was found, the temperature remained hectic for a week, when it fell to normal, and patient became apparently quite well. At intervals of about a month after this patient had three sudden attacks of abdominal pain, with a rise of temperature to 103°, and vomiting; each time the vomit largely consisted of pus of a distinctly blue colour. She quickly recovered from these attacks, and after the third she remained well for about three months, when she was discharged recovered.

M. R—, æt. 32, admitted on February 23rd, 1897. Mentally she was suffering from acute melancholia with suicidal impulses: shortly after admission she made determined attempts to strangle herself with a piece of torn clothing and her hair, which was very long. After this she developed strong homicidal tendencies in addition to her suicidal ones; she afterwards forced a knitting-needle about four inches into the retro-pharyngeal tissue, and she several times poured her tea down her chest in the hope of scalding herself: she would also swallow any stray pins and needles which she might find lying about.

Nine months after admission she complained of pain in her abdomen: no tumour could be felt, but there was distinct tenderness over the descending colon; she said she had swallowed some sewing needles which she had found on the floor. Nine months after this she complained of pain in the right hypochondrium, and she vomited some greenish matter: shortly before this she had commenced to lose flesh. She took to her bed and complained of general abdominal tenderness, which was more marked in the left hypochondrium: she was also troubled with persistent vomiting, which was unrelieved by drugs. A fortnight after this the abdominal pain had much increased, she had become very emaciated, and a tumour was felt over the pyloric end of the stomach; there was also marked resistance and dulness in the left hypochondrium, extending about four inches below the costal margin. Patient said she had swallowed some hat-pins about six months previously.

The abdomen was opened on November 30th ; the abdominal muscles were infiltrated with inflammatory material, and half a sewing needle was found embedded in them.

The stomach was found, and a sharp point was felt protruding through the walls : an incision was made and three hat-pins were taken out. The stomach was closed with Lembert's sutures. The patient was extremely ill for forty-eight hours after the operation, but she rallied ; in ten days the abdominal wound was healed, in three weeks she was sitting up and taking light, solid food. She was discharged cured, mentally and bodily, three months after the operation.

It will be noticed that all four cases, in addition to turning out complete surgical cures, also made good mental recoveries.

Much importance cannot be attached to the mental recoveries of G. D— and M. M. D—, as their insanity was of a very recurrent type, and they had so frequently recovered and relapsed, but the cases of M. R— and A. W— were quite different. Both these were cases of profound melancholia accompanied by intense suicidal impulses, and both cases shewed no tendency to mental improvement ; on the contrary, they were apparently relapsing into chronicity and their delusions were becoming fixed. Immediately after the operation their insanity disappeared, and I think one must attribute this result to the profound mental impression which was made upon them by their undergoing a serious surgical operation : analogous mental effects are occasionally seen when the insane are attacked by some acute bodily diseases.

There is no doubt but that all four cases would have terminated fatally in a short time had they not been relieved by operation, and the nature of the operation in each case demanded surgical skill and experience, which, as a rule, is not possessed by the medical staff of an asylum, and so outside help was called in in each case. The point on which I wish to insist is, that the insane should have the best surgical skill obtainable, instead of either having surgical conditions allowed to persist because the patient is only a lunatic, or, on the other hand, having the patient subjected for serious operations to the prentice hand of a medical officer of the institution. In certain emergency operations, in which the services of a skilled surgeon cannot be obtained without delay, it is the duty of the medical attendant to do his best for the patient ; but is it right that

serious operations, in which there is no particular urgency, should be performed by men, unpractised in, and perhaps unfamiliar with, modern operative procedure?

One cannot be too alert in looking out for surgical conditions in the insane, as on the one hand, a patient's complaints may be ascribed to delusions and so ignored, and on the other hand, an insane patient may suffer from severe and even painful surgical conditions, with apparent contentment.

In the case of the swallowed hat-pin, it is worth noting that the patient discovered that idea of committing suicide, by reading in one of our enterprising dailies the gruesome details of an operation for the removal of a hat-pin from the intestines, which was performed unsuccessfully at a London hospital. Each of the above operations was performed by Mr. Paul Bush of Bristol.

Discussion.

At Spring Meeting, South-West Division, 1899.

The Chairman having commented upon the interesting as well as practical character of the paper, said he quite agreed with the remarks of the writer as to the necessity of calling in experienced surgical aid in cases which might occur. The infrequency with which asylum doctors had to deal with anything seriously surgical made them hesitate to undertake any serious operation themselves. Of course the question of expense might enter into the minds of some committees, but in the only public asylum with which he was associated they constantly sought surgical assistance from the general hospital at Leeds.

Dr. Wade mentioned that he had the opportunity of ascertaining a few days since the condition of the two patients who were operated on, one for the tumour and the other for the hat pins, and both were perfectly well. There was a time—he was happy to say it was past—when it would have been impossible under the nursing arrangements in asylums to have attempted to treat such cases at all. He would have been sorry to have seen the cases treated under the conditions that obtained when he went into lunacy first. As to obtaining surgical aid he could only say that one of the rules with his Committee was that the medical superintendent had the right to call in outside assistance. The cases they had had before them being particularly interesting, he had invited Dr. Paul Bush to be with them that day, and he had pleasure in introducing him to the meeting, feeling sure that they would be glad to hear what remarks he might have to make on the cases.

Dr. Paul Bush said he must first of all thank them for their kind invitation to be present, an invitation which it gave him very great pleasure to accept. He hoped he should hear some discussion, not so much from the surgical aspect of the cases as with regard to the result or effect (if any) for good or for bad that major operations had on this class of patient. He wished it to be understood that these cases were consecutive cases, a fact which it was important to mention, because unless cases were taken in some kind of order, and none omitted, they could not possibly be of the same value. He should like to hear whether the occurrence was uncommon of four consecutive cases of grave major operations, in which the patients all began to improve almost at once with regard to their mental condition, were finally discharged mentally cured, and remained so. Dr. Bush then surveyed some surgical points of interest in the cases reported, and remarked that the successes obtained were largely due to the careful after-treatment at the asylum.

Dr. Benham said he had personally been deeply interested in the account of

these major operations. He proceeded to cite a case of a very striking nature which he had had in his own experience, that of a ruptured urethra. Their consulting surgeon operated, and eventually the patient recovered, and they supposed erroneously that the man had been assaulted by an attendant. The patient got perfectly well, but eighteen months after he died, and on the post-mortem table they found protruding into the abdominal cavity a portion of the rib of an umbrella. It only illustrated the same tale, that in the case of an insane person they never knew what they were going to find. With regard to calling in outside aid, he was in the same fortunate position as Dr. Wade in having the permission of his Committee to do so. He knew of a case where a medical officer in an asylum operated in a major case which was followed by death, the coroner was called in, and for some reason or other was not satisfied, and there was a long inquiry into the matter, which ended in an outside surgeon of eminence being called in to give his opinion as to whether what had been done had been properly done. He was glad to say the opinion given thoroughly vindicated the asylum authorities. It merely showed that by having the power to call in outside aid they were able to free themselves from a possibility which might prove troublesome. They operated once on a man for strangulated hernia, the case ending fatally. The friends of the man came and informed them that they had committed murder. He referred the wife to the operating surgeon, and she went into the infirmary and saw him. He merely said to her, "Go away, woman, the operation was quite as necessary as for you and me to have our breakfasts." He knew of many instances where major operations had been performed, and where the patients had quite recovered from them; there were two or three in the asylum at present who were now perfectly well physically, and he could remember more than one case in which a patient had been operated on and been sent out recovered.

Dr. Macdonald said he was sure it had been a great pleasure to them to listen to Dr. Sproat's remarks on these cases, more particularly as they had the benefit and pleasure of the presence of the operating surgeon, who had told them his own tale. Dr. Bush had asked the question whether anyone could give any facts as to whether or not a sequence of four major operations, all followed by recovery, was common or uncommon in any asylum. He should say that such a thing was most uncommon, and perhaps he might go so far as to say it was unlikely to occur again in the history of Wells Asylum in so short a time. It was almost startling that four such cases should occur in so short a time, and all be followed not only by a complete surgical but mental recovery. He might say that he was also glad to add his testimony to the value of outside opinion. He was in the happy position of having a free hand, and was able to call in aid on any occasion. He went further, and always insisted that when anything in the shape of an operation was to be performed, and chloroform had to be given, an outside man should be present.

Dr. Sproat, briefly replying to the discussion, said he was very pleased to hear it was the custom in that division to call in outside surgical aid in the case of major operations. He included the remarks on this subject in his paper because he knew for a fact it was not the custom throughout the whole of the country.

On the Causes of the Increase of Suicide. By William W. Ireland, Mavisbush, Polton, Midlothian.

It would perhaps be allowable to take it for granted that the number of suicides has been steadily increasing in most of those countries which furnish us with trustworthy

statistics, but after the discussion in Section E at the last meeting of the British Medical Association, I think it better to go over some of the reasons which have led me to subscribe to the view generally received by those who have carefully inquired into the subject.

I listened with interest to the lecture read by Dr. Sibbald, which has since been published in the *British Medical Journal*, September 10th, 1898. In this paper Dr. Sibbald makes no account of the statistics which have been accumulated in other countries for the last seventy years. He looks at Scotland and England alone, and he observes there is no satisfactory evidence that suicide has been increasing in our island, on which account he regards with distrust the general statement that suicide has become much more frequent in other countries. There is no necessity for believing that this unhappy rise is common to every people. One ought not to shut out the idea that the underlying causes, whatever they may be, do not act with the same force in every country. Self-destruction may be increasing in one country at different rates, and diminishing in another, but when one country is pointed out as an exception to a rule which holds good all round, we are disposed to scrutinise narrowly the grounds for such a view.

Briefly stated, Dr. Sibbald's argument amounts to this: the five commonest methods by which self-destruction is effected are by firearms, by cutting and stabbing, poison, drowning, and hanging. Of these hanging is the least liable to escape concealment. Forming in England 54 per cent. of the whole suicides, and in Scotland 29 per cent., this proportion has remained stationary in both countries, though there has been a sustained increase in suicides by other methods; therefore it is doubtful whether this alleged increase is real or only apparent. *A priori* there seems no reason to presume that the means used for self-destruction should always keep the same proportion; in fact, we know in some countries they have altered. Suicides through throwing one's self before a railway train have been increasing with the spread of railways, and within the last six years a special heading has been given to this method of death in the tables of the Registrar General of Scotland.

Though not required to give an explanation, I could suggest some reasons why many suicides should become less inclined to resort to this disgusting form of self-destruction, which is used

by males much oftener than by females. When the suicidal desire is strong there is no great preference as to the means. The readiest is generally accepted, and a rope is always at hand. When there is a choice of the ways of going out of life persons are much led by ideas forcibly implanted in the mind, or by what is called imitation. Now the gallows has, within the last fifty years, been much removed from the public eye and mind by the great diminution in capital punishments, and the remaining executions being done in private. Of late years hanging has been regarded as too painful a punishment even for murderers, and it has been arranged that as a capital penalty the rope does not cause death by strangulation, but by dislocation of the spinal column. For some years back criminals sentenced to death in New York State have been executed by passing a current of electricity through the body. Whether this has led to hanging becoming a less frequent mode of self-destruction in that State is not known to me, but statistics show that it is not nearly so much employed in New York and Connecticut as in Britain or in Germany. It is more rarely employed by suicides born in North America than by foreigners.

One would think that as education increases, men would be more inclined to seek a painless death, such as the use of narcotic poison or shooting through the head. Death by poison is a commoner method of self-destruction than hanging. Of all forms of exit this seems the most likely to escape public notice, hence there might be a considerable increase of such suicides without their appearing in the tables of the Registrar General. In any case we cannot regard the statement that suicides by hanging have maintained much the same proportion as an argument of any weight against the general evidence that the practice of self-destruction keeps on swelling like a rising tide along the whole line. One wave advances and retires, another reaches a higher point; then another falls short, and we might think that the advance is stayed, but it goes on covering one strand after the other. Thus in the number of suicides there is a larger average some years than others; in some the number may be even less than before, but the rise is steady if fluctuating. Each country has its own rate of so many suicides to the million of inhabitants, and this rate is sustained and mounts in a certain proportion. In fact,

the regularity of the rises and curves in these statistics is too definite to be casual.

Durkheim,[1] dividing the year into six warm months and six cold months, finds there are always more suicides in the former. This holds good of all countries. Of one thousand suicides yearly, from 590 to 600 are committed in the fine summer season, and but 400 in the rest of the year. We do not find that the prevalence of suicide and of lunacy keep pace with one another. Indeed, if we compare the proportion of lunatics and suicides to the general population, it appears as if suicide is commonest where insanity is rarest; but if we add the tale of idiots to the insane we find a different relation, though a somewhat loose one. Dr. Ogle [2] has shown that suicide in England is much commoner with educated persons than with the uneducated.

In presenting as briefly as possible some of the statistics which indicate that the roll of suicides has been steadily increasing in almost all countries since the time we have any trustworthy statistics to compare, we ought to explain that these figures are far from giving the whole truth. Those who have examined the details like Brierre de Boismont and Strahan are of opinion that the registered number of suicides may be taken as representing about half those actually committed. This does not appear too high when we consider the large number of persons found dead whose death does not appear to arise from natural causes, and are entirely unaccounted for, many of which are no doubt suicides. This is well shown by the opposite table of those who have been found drowned in the Clyde and those known to have thus sought their own deaths, kindly furnished to me by my friend Dr. Alexander Robertson (see next page).

Nevertheless we may feel pretty confident that an increase in the gross number of suicides would make itself felt in the number ascertained to have made away with themselves who would thus appear in the statistical returns, and that errors and deficiencies in local details would be rectified in great averages taken from large populations covering considerable periods of time. Dr. Strahan,[3] who has carefully studied these statistics, thus records the conclusion which he has reached. "Taking the recorded numbers as being relatively accurate, we find that in the twenty-two years 1867 to 1888 the number of suicides

Suicidal cases in the Clyde within the sphere of the Glasgow Humane Society's operations.

Year.	Cause of drowning not known; many doubtless suicides.			Known to be suicides.					
	Found drowned.			Drowned.			Rescued.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1887	19	6	25	4	3	7	4	4	8
1888	21	6	27	1	...	...	2	2	4
1889	22	13	35	3	4	7	2	3	5
1890	25	4	29	5	...	...	4	1	5
1891	31	4	35	2	...	...	4	4	8
1892	30	8	38	4	2	6	8	4	12
1893	22	8	30	4	3	7	4	7	11
1894	25	4	29	3	1	4	5	6	11
1895	15	3	18	1	....	1	6	3	9
1896	27	5	32	5	2	7	7	6	13
1897	40	8	48	5	1	6	11	8	19
1898	24	11	35	3	5	8	2	4	6

This includes a section of the Clyde between a point about half a mile above the city to the lowest parts of the harbour.

has risen steadily. In the former year there were 1316 discovered suicides in England and Wales, and in the latter year 2308, which gives an increase of over 75 per cent. in the twenty-two years. That increase of population is not responsible for this difference is shown by the fact that while the rate was only sixty-one to the million persons living in 1867, it had attained eighty-two per million in 1888—an increase of more than a third within the twenty-two years.

"This steady and rapid increase of self-destruction is common to the whole civilised world. It is most marked in those countries which take leading parts in the world's doings, but it is noticeable in all. Dr. D. R. Dewey has recently been studying the question in the New England States of America. He finds that since 1860 suicide has increased about 35 per cent. In Massachusetts it has increased in thirty years (1860 to 1890) from 69·9 to 90·9 to the million living; and in Connecticut from 60·6 to 103·3 per million."

A table taken from the most recent book upon the subject, by Émile Durkheim, will serve to show the increase of suicide in the different countries of Europe, given in quinquennial periods.

Rate of suicides to the million in different countries of Europe.

	Period from 1866 to 1870.	1871–1875.	1874–1878.
Italy	30	35	38
Belgium	66	69	78
England	67	66	69
Norway	76	73	71
Austria	78	94	130
Sweden	85	81	91
Bavaria	90	91	100
France	135	150	160
Prussia	142	134	152
Denmark	277	258	255
Saxony	293	267	334

For the use of readers interested in such statistical inquiry I add a few figures which, by the kind help of Dr. Blair Cunynghame, I collected at the Register Office, Edinburgh. As far as my inquiries go, Norway seems the only country in which the number of suicides is diminishing. In 1893 there were 87 male and 43 female suicides = 130 in all. The population by the census of 1891 was 1,988,674. Thus the proportion of suicides would be about 65 to the million (compare this with the table). The mean number of suicides in Belgium in the five years between 1885 and 1890 was 594 males and 119 females = 713 in all. The actual number of suicides in 1890 was 724; in 1895 it was 660 males and 152 females = 812; in 1896 it was 668 males and 141 females = 809. The population of Belgium on 31st December, 1896, was 6,495,886; the rate of increase was, from 1880 to 1890, 54,931; and from 1890 to 1896, 71,094.

In an article entitled "Le Morti per Pellagri, Alcoolismo e Suicidio in Italia," by Dr. Fornaseri di Verce, in the *Rivista Sperimentale di Freniatria*, vol. xxiv, fasc. i, 1898, the author observes: "Suicide has continued the movement of ascent which is proper to it, rising from 890 verified cases in 1872 to 1343 in 1881, and to 2000 in 1898." Prof. Sikorsky, of Kiew, states the proportion of suicides in Russia as only 30 to the million.

Though some writers of good reputation have insisted that suicide is in itself a proof of insanity, it seems surprising that any one acquainted with history should hold such a view.

There is, however, no doubt that many of those who take away their own lives are really deranged. As to the proportion between sane and insane suicides there is considerable disagreement. From the statistics furnished by Morselli in his classical work *Il Suicidio*, it appears that this proportion may be about one third. In Italy, he tells us, 50 per cent. of all the suicides are due to pathological causes. Laehr says that in Prussia, during the year 1876, one quarter, and in France (1875) one third of the suicides were caused by mental diseases. It has been stated that from 47 to 48 per cent. of the suicides in Japan(4) were driven to self-destruction by insanity. Other writers have stated the proportion as much smaller. Dr. Wynn Westcott thus writes in his book on suicide(5): "I have made careful investigation into all the cases of suicides which I have observed, and all those cases upon which I have held inquests, as the deputy for Dr. Danford Thomas, in Middlesex, and I have found that in 20 per cent. only had the deceased ever exhibited symptoms of insanity obvious to the friends and relations."

Dr. Strahan(6) quotes Dr. J. J. O'Dea, of New York, who "sets down a third as the proportion of suicides insane, but attributes another third to what he calls 'latent insanity.'"

Dr. Emil Kraepelin, in the last edition of his book on psychiatry,(7) observes: "I have, in accordance with the experience of others, been able to ascertain through the observation of rescued suicides that only 30 per cent of them offer decided symptoms of insanity." Judging from these estimates we may put down the proportion of suicides decidedly insane as from 25 to 35 per cent. of the whole number. It may be observed that, assuming, as is generally done, that the number of those willing to put their relations in asylums is greater, and the care and appliances for treating such patients have been much improved, one might naturally expect as a result a diminution in the number of those who succeed in making away with themselves, whereas the contrary is the case.

All those who have made a special study of this subject have arrived at the conclusion that there is in Europe and North America a steady increase in the number of suicides. Some say that it is mounting in Europe at the rate of 50,000 a year. Different causes have been assigned by sociologists for this formidable rise. The question has attracted my attention for

some years, and without claiming to advance anything new, I venture to state my views as to the efficacy of some of the causes which, at least in their connection, have not yet gained the assent to which they are entitled. In doing so I shall treat all suicides together, rejecting as too technical the divisions of quasi-suicides, altruistic, egotistic, and anomic suicides, which some authors have used to exhibit their theories. Most of the causes which impel men to seek their own death are the same in the sane and insane. People get weary of life and seek death because they are unhappy. Their misery overpowers the natural love of life. Self-destruction in the sane naturally takes place amongst persons who feel hopelessly ruined or disgraced, or subject to some pain or overwhelming affliction, from which they are unable to escape. Physicians may expect to be occasionally consulted about the sanity or insanity of men who have deliberately insured their lives for large sums, and then made away with themselves in order to provide for their families.

Though a few men may deliberately destroy themselves in cold blood, we can scarcely be wrong in assuming that before being impelled to an action so repugnant to nature, most men are in a very troubled or distracted state of mind. For some time past their minds have been unhinged; they have lost their appetite for food, or have been sleepless for many nights. The unquiet mind has acted upon the body, and the disturbed bodily functions have reacted upon the mind. Though there are many suicides not so mad as to be certifiable, one may be sure that a good number of them are scarcely sane. We may fairly assume an underlying low state of health. Some commit suicide after drinking heavily. Dr. Haig would trace many cases to the use of tea, and no doubt when the beverage is much indulged in one may often observe a weak, depressed, or irritable state of nerves which favour the reception of dismal and suicidal ideas.

Dr. Fehr, in his learned work, *Influenza as a Cause of Insanity*,(8) states that in Denmark, after the severe and widespread epidemic of this malady in 1887–8, there was observed a rise in the number of suicides.

Goëthe, who had a deep insight into character, thus makes Werther argue: "Human nature has its limits—can bear joy, sorrow, and pain up to a certain degree, but gives way as soon

as that is over-passed. The question here is not whether a man is weak or strong, but whether he can endure the measure of his suffering? This may be moral or physical; and I hold it as strange to say the man is cowardly who takes his own life as it would be to call a man a coward who dies of a malignant fever."

No doubt if we diminish men's powers of endurance while we increase their sensitiveness we favour the tendency to suicide, and this is what has taken place. I do not believe that there is any proof of general degeneration in the younger generation—quite the contrary. I think that in Britain, as well as in France and Germany, there has been an improvement in the vigour of the race; but an improvement in general health does not preclude a falling off in some directions, and our mortality returns indicate an increase in diseases of the nervous system, of the heart and arteries, and of the urinary organs.

Dr. Strahan, who holds that the increased tendency to self-destruction can be traced to causes attendant upon modern civilisation, has taken the trouble to inquire into the statistics of twenty-five years back. He found that the deaths from nervous diseases in 1866 were 1583 per million; in 1890 they were 1745, an increase of 10 per cent.; the deaths from kidney disease for the same period were 276 and 451, an increase of 63 per cent.; the deaths from diabetes were 32 for 1866 and 65 for 1890, increase 103 per cent.; heart disease, 1059 and 1757, increase 65 per cent.; suicide, 62 and 77, increase 24 per cent. These figures have their significance; but it is scarcely to be expected that we shall be able to decide such fine questions by the rough test of statistics. There are many maladies which make life miserable that are in nowise indicated by the registers of mortality. In fact, some nervous diseases may be said to prolong life by causing the patient to withdraw from the struggles of the world, and so the question whether the totality of nervous diseases is becoming greater must be left to individual experience.

It certainly is the opinion of many distinguished neurologists, both in Europe and America, that the increased strain of modern life upon the nervous system, to which so many persons are now subjected, has had the effect of increasing the number of nervous diseases and bringing hitherto unobserved forms into prominence. Objections may be made to this opinion, which I

have discussed elsewhere,(9) nor is it expedient that we should come too hastily to a conclusion. The assumption would be in unison with the increase in the number of suicides, and the alleged increase in the number of the insane in so many countries, which is steady and progressive. With regard to this latter question, I have not examined the statistics sufficiently to arrive at a definite opinion on the subject. The General Lunacy Boards, both of England and Scotland, have pronounced that the rising numbers of known lunatics may be explained in other ways than by granting an absolute increase. They attribute the apparent rise to the accumulation of chronic cases and the greater readiness of the relations of lunatics to place them in asylums instead of keeping them at home. Nevertheless, the augmentation in the number of registered lunatics in 1897 might well make one hesitate in accepting this, which, after all, is no better than a compromise.

It may be here observed that those who argue that there is no real increase in the number of lunatics in Great Britian make no use of the statistics of the countries on the Continent, and even declare them to be untrustworthy. These statistics go to prove that insanity is really increasing. Now, I lived for six years on the Continent, during which time I made inquiries involving frequent reference to statistics, and I formed a decided opinion that the statistics of most of the Continental countries were much more strictly collected and better checked than those taken in Great Britain.

There is a steady increase in the numbers of registered lunatics in almost every country in Europe, and it is difficult to put this down to an everywhere increased inclination to accept asylum accommodation. Writers like Koch, Kollman, Cettingen, and Lunier, who have made laborious studies on the question, have arrived at the conclusion that there is a progressive increase in the number of the insane in proportion to the population in most countries in Europe. As far as my own imperfect inquiries go, I am inclined to think that we must admit a real increase of insanity in Ireland, in the State of Massachusetts, and in Norway, in spite of the alleged decline of drunkenness in the last country.

No doubt a practice so widely diffused as suicide must have many causes ; but it seems to me that the most potent cause is mental. However little one's conduct in ordinary life may be

influenced by his creed, it is easy to see that to a man purposing self-destruction, his beliefs or surmises as to what may be after death must assume a prime importance. He is tired of this world; but will he be better or worse behind the dark curtain? Thus we find that the frequency of suicide is much influenced by religious belief. Amongst the adherents of those faiths which strongly condemn self-murder it is not so often met with. Morselli's statistical tables clearly show that it is rare in strictly Catholic countries, such as the Spanish Peninsula and Southern Italy. In Ireland it is also rare—about half as common as in Scotland—and the Irish, whether Catholic or Protestant, are fervid in their religious views. Self-murder is strongly condemned in the Koran, hence it is rare amongst Mahomedans, though they are encouraged to throw away their lives in battle against the infidels. The Brahminical religion encouraged widows to burn themselves with their husband's dead body. It is recorded that as many as fifty of the wives and concubines of a Hindu grandee, who lived in the days of Akbar, destroyed themselves on his funeral pile.

Hindu pilgrims used to throw themselves before the car of Juggernaut, at Puri, or precipitate themselves from a high rock near the Temple of Vishnu at Kedarnath in Gurhwal. Some votaries would leave their homes in Bengal or Guzerat for the avowed purpose of killing themselves in this remote place in the Himalayas. This practice was stopped about 1855 by the British Government, who threatened to hold the high priest of Kedarnath responsible for any case of suicide of the kind. [For this information about Kedarnath I am indebted to Dr. William Watson, who was, from 1869 to 1880, superintendent of the Gurhwal Pilgrim Dispensaries.]

It does not appear that the Buddhist religion directly encourages suicide; but as death holds out at worst the prospects of a change of being, Buddhism does not act as a deterrent; hence suicide is far commoner with the Chinese and Japanese than with other nations.

The increasing frequency of suicide in Europe and North America is, no doubt, owing to the spread of materialistic views and the decay of religious belief, which have been very marked during the last century. It is in great cities like Paris, Berlin, and Vienna, where agnosticism abounds, that we have the greatest number of suicides. Where death is considered the

end of all sufferings, the last and most thorough opiate to misery, it is not surprising that it should be sought by those who have give given up all hope of escape from disease and misfortune. Yet so great is the love of life, and so inexhaustible is hope in the human breast, that it is not at all likely that suicide could ever become very frequent, even if materialism were the universal belief. Neither Schopenhauer nor Hartmann approved of suicide; but as they taught that life is an evil and that the will to live should be kept under, it is not surprising that some of their followers should be ready to get rid of their lives when sorrows and disappointments came. Philip Mainländer pushed the philosophy of pessimism to its logical consequences.([10]) To those weary of suffering and without hope of relief Mainländer gave the advice, "Go without fear, my brother, out of this life, if it be too hard for you. In the grave you will find neither a heaven nor a hell." Though possessed of great talents and in easy circumstances, his mind seemed never to be at rest. He thought it his duty to spread the doctrines of social democracy, on which account he had stormy discussions with a beloved sister, the sharer of his ideas and studies. Wearied with doubts and disgusts he put an end to his own life in March, 1876, the same month in which he had received the first printed copy of his *Philosophie der Erlösung* (Philosophy of Redemption). His sister explained that he had taken the first piece of linen which seemed strong enough to hang himself, in order to convey the lesson that a man too poor to buy a pistol could easily find another way to escape from life. He was thirty-five years old when he thus sought death. His sister, Minna Mainländer, having spent all her patrimony and being reduced to destitution, made away with herself by cutting her throat with a razor, fourteen years after her brother's suicide.

In the *Revue des Deux Mondes*, 1er Mai, 1898, there is a pathetic article entitled "Les Suicides par Misère à Paris." The author, Louis Proal, tells us: "In 1836 Dr. Leuret wrote that there were scarcely more than seven or eight suicides through want each year in Paris; to-day one counts from 300 to 350. A great number of workmen, goes on M. Proal, fall into want through their own fault, through indolence, debauchery, and intemperance; but a number of others, petty employés, small shopkeepers, young and old workwomen, are very un-

fortunate without having anything to reproach themselves with." He traces much of this wretchedness to the difficulty of obtaining constant work, and to the low rate of wages of some employments. He observes that drunkenness is often not the cause of the distress, but the effect. Unable to support their misery they take to drinking, and perhaps in the end commit suicide.

The following translation will show M. Proal's views as to the cause of this alarming increase of self-destruction :

"I attribute this lack of resignation to the weakening of the religious sentiment in the people of Paris. During the seventeenth and in the first half of the eighteenth century the religious sentiment was maintained in the people, while it was weakened in the higher classes. To-day the reverse is the case,—while the higher classes through conviction, interest, or fashion, understand the social necessity of religion, the people of Paris are more drawn away from it. Thirty years ago, while losing their Christianity, the people of Paris had preserved natural religion, belief in God and a future life ; but to-day religious indifference and even hostility to religion are so widely spread that I found in a large number of letters the request for a civil burial."

I regret that the length of this paper precludes me from trespassing so much on your time as to treatment of suicide in the insane. I shall therefore content myself by stating my conclusion that the increase of suicide is due to a more severe strain upon the nervous system, a greater sensitiveness and irritability, with a diminished power of resistance, owing mainly to a change in religious beliefs.

Discussion.

At Spring Meeting, Scottish Division, 1899.

The Chairman said he had no doubt they would agree with him that they should express their obligation to Dr. Ireland for his important and interesting paper. To those who heard Dr. Sibbald's paper it was doubly interesting because Dr. Ireland evidently did not agree with the general indication to which Dr. Sibbald's figures led him. They had as yet probably not the definite facts on which to form definite opinion in regard to this very obscure and very interesting subject. In regard to the causes of suicide, he would put them down under the following heads:—First, a certain individual might be born with a congenital absence of love of life, just as he might be born with a congenital absence of one hand, or one foot, or any other organ. They all knew quite well that instinct of humanity was a great protection against suicide, and that class of individual had been much referred to. He was quite certain from his actual experience and analysis of the character and dispositions in cases that had come before him that

there were certain children born who were devoid of any fear of death, who had no love of life implanted in them.

Dr. IRELAND asked if the Chairman meant in childhood or afterwards.

The CHAIRMAN.—The whole life. They all knew that the fear of death with everybody was a question somewhat of degree. One man had it more than another, and probably women had it more than men, as was shown by the less frequency of suicide among them. This was a subject which he would commend to the attention of the younger members of the Association for analysis. He could recall quite a number of cases showing the congenital absence of the love of life. Secondly, he would put as the cause of suicide—one of the most frequent—insanity in its various forms of melancholia, delusional insanity, &c. These forms of insanity drive to suicide in different ways. In some cases they removed the love of life; in other cases a morbid feeling arises much stronger than the love of life. There were other suicidal causes, such as in epileptic persons who were insane and unconscious, and who were suicidal in that condition. Still that was insanity. Dr. Ireland had not enlarged on the question of drink. He would like exceedingly to see the proportion of suicides as they were related to the amount of alcoholic consumption in any community. They knew that drink would cause suicides before a man became technically insane. No doubt these people were infected morbidly, but they were not technically insane in the ordinary sense, and would not be held to be so. He thought there was another very important kind of cause, which Dr. Ireland alluded to, and it was this, that a man having plenty of the instinct of the love of life, while not technically insane, is neuropathic, he is over-sensitive, he cannot resist the influences at work for want of hope; and those were a very large class indeed, as they knew, looking at it from a scientific point of view. Their brains were allied to the insane cases, but still they were not actually insane. What were they to make of the couples who committed suicide together? What were they to make of the cases where a man makes up his mind he cannot get on, or something is going to happen, and induces his fiancée to commit suicide with him? That resulted directly from the strong will of one person combined with affection acting on the disposition of the other and overcoming the second person. That very frequently happened, especially in Paris. Lastly, there are suicides which do not come under these heads, semi-logical deliberate suicides, and if they could eliminate every one of the previous motives they would find that there were very few semilogical deliberate suicides. He thought that Dr. Westcott was absolutely mistaken in only putting 20 per cent. of suicides as due to insanity. As regards the number that would come under each of those headings he did not think they had facts to enable them to express any opinion.

Dr. CAMPBELL CLARK said he would not like to allow the opportunity to pass without expressing personally his thanks to Dr. Ireland for his most interesting paper. The feeling one had at the end of a paper like that was that a great deal remained unexplained. Looking at the statistics of suicides in Europe the differences were very great. According to Dr. Ireland the statistics of the Continent were quite as good if not better than their own, and one felt one would like to get behind the veil and get an explanation why there should be such a great difference say between Saxony and Italy. Dr. Ireland had quoted one or two authorities who said that with civilization, with the extreme amount of nervous and business strain, suicides increased. One would like very much to know if that was the case in Saxony as compared with Italy. The religious question will likely explain to a large extent the smaller statistics for Italy. He was rather struck with the prevalence of poisoning and drowning as forms of suicide by the female sex. The other causes were certainly much more painful and much more trying. With regard to the question raised by Dr. Sibbald as to whether there was a real increase or not, it was interesting to notice the statistics given of drowning in the Clyde at Glasgow, and to observe what a large proportion of cases of drowning were not explained at all. The number of really known suicides was a very small proportion of the whole.

Dr. MACPHERSON said with regard to the question started by Dr. Campbell Clark with respect to the disparity between the number of suicides in Italy and Saxony and this country, he happened to be in Saxony last year. When there he was told that Saxony was the most drunken country in Europe, that the number

of people put into the asylum suffering from acute alcoholism was, if he remembered rightly, 23 per cent. He had an idea that the same argument might probably be applied to Denmark. It was a pity that Dr. Ireland's total was not carried down to a later date than it is, because he believed the suicides especially in France had decreased since the Franco-German war. He was only speaking from memory on that point. With regard to Italy he was quite unable to explain the extreme disparity. His views on the matter of suicide coincided very much with those expressed by the Chairman. He was not able to follow Dr. Ireland in all that was said in his valuable paper, but he wished to express gratification at having been able to listen to it.

Dr. Carlyle Johnstone said he did not think he could agree with all that Dr. Ireland had said. It seemed to him that what was called the love of life was really improperly called so. Whatever it may be, it seemed to him that the loss of natural instinct implied insanity, and the cause of such insanity seemed to him to vary as much as the cause of insanity in general. He was of opinion that one was quite unwarranted in putting forward as the cause of this great insane condition the disbelief in religion or change in religion. Most of them when referring to religion had in their minds religion as it has existed for not more than 2000 years. Two thousand years was a mere drop in the ocean in the history of the world. What was the religion that went before us, what of the insanity in classical times, and what of the proportions of suicides then? What of the proportion of suicides among the so-called barbarians? He should like to ask Dr. Ireland if he had any information as to the number of suicides in classical times, and what bearings the religious beliefs of the people at those times had.

Dr. Carswell said the proper heading of the second table shown by Dr. Ireland was "Drownings in the River," not suicides at all. He was struck by one of Dr. Ireland's remarks to the effect that there was no proof of a general rise in degeneracy in European nations. He would like to know the members' views with regard to alcohol and suicide. He had seen a considerable number of people taken to the infirmary with cut throats or attempted poisoning, or taken to the police office in that condition, and who for a few days manifested some symptoms of mental disorder, and were in a few days all right again. These people had been drinking, and he had no doubt that there was a form of alcoholic depression, really a form of delirium tremens, but not taking the usual form of delirium tremens; that was to say, a kind of mild mania. The form of depression of such people frequently makes them attempt suicide, and within a few days or a week they are all right again. These cases rarely reach the asylums.

Dr. Hotchkiss said that Dr. Magnan found in his experience that practically all the cases of delirium tremens began with a slight amount of depression, and referred to the great risk of suicide during that time. He saw cases at the very first, and he (Dr. Hotchkiss) would suggest that what Dr. Carswell was describing was simply the beginning of an ordinary attack of delirium tremens.

Dr. Carswell said that he saw them right through.

Dr. Hotchkiss said he had studied specially all the cases that had occurred in Gartnavel for some years, not so much the acute as the chronic ones in which the chief symptom was melancholia, and in all the cases that occurred there every one had been suicidal except one, which was a doubtful case. He thought the influence of alcohol in causing suicide was very great indeed.

Dr. Turnbull referred to the extraordinary differences in the proportion of suicides in various European countries as shown in one of the tables, and asked if Dr. Ireland could throw any light on the reasons for this. He combated Dr. Carlyle Johnstone's statement that religion cannot be taken as having a great influence. Religion, as understood by the mass of people, is very much a matter of education, and we all know that education and surrounding circumstances have a very great effect on the mental development and on the general results that come from it. He therefore concurred in Dr. Ireland's view on this point.

Dr. Ireland said he was very much obliged to those present for the additional considerations which they advanced. He would have been very pleased if there had been more present and more suggestions had been made. The object of his paper was not to be a complete book on suicide. It would have taken hours and hours to have given a sound idea of some great causes of suicide. He thought it likely that the question of the steady increase might be disputed. He was struck

by the Chairman's very pertinent remark about the congenital absence of the love of life. But if that was so, why was insanity not more common? As to the number of suicides in Glasgow there were no data, as far as he knew, from which a proper conclusion could be arrived at. He thought that the younger generation at present on a whole were stronger and more active and perhaps a little bigger than those before them. He did not think that the number of suicides increased in the degenerating classes. He thought that suicides were much more common amongst the educated classes. He thanked those present for having listened to his paper.

(1) "Le Suicide: Étude de Sociologie," par Émile Durkheim, Paris, 1897, p. 86. —(2) "On Suicide in England and Wales," *Journal of the Statistical Society*, March, 1886, pp. 111, 112.—(3) "Suicide and Insanity," by S. A. K. Strahan, M.D., Barrister-at-law, London, 1893, p. 186.—(4) "Ueber Selbstmord und Selbstmordversuch bei Geisteskranken," von Dr. Shuzo Kuré, *Jahrbücher für Psychiatrie*, Band xvii, Heft 3, 1898.—(5) London, 1885, p. 127.—(6) Op. cit., p. 95.—(7) *Psychiatrie: ein Lehrbuch für Studirende und Aerzte*, sechste Auflage, Leipzig, 1899, Band i, S. 286.—(8) "Influenza som Aarsag til Sindssygdom," *Historisk-Klinisk Undersögelse af H. Fehr, Reservelaege ved Sinds-sygeanstalten i Viborg*, Copenhagen, 1898.—(9) *Edinburgh Medical Journal*, December, 1895, and February, 1896.—(10) See a paper by Dr. Mossa in the *Irrenfreund*, Nos. 1 and 2, 1891, and one by myself entitled "Pessimism in its Relation to Suicide," in the *Alienist and Neurologist*, April, 1892.

Unna's Polychrome Methylene Blue Method. By T. Aldous Clinch, M.D.

In the *Neurologisches Centralblatt* for July 15th, 1898, Drs. Luithleu and Sorgo describe a method of staining the central nervous system, which at that time I believed to be new. However, Dr. Wright, in the summer number of *Brain* for the same year, and therefore about the same time, referred to, without describing the same method, so that it is obvious that it had already claimed some attention from neurologists.

The great advantage which, in my opinion, has been justly claimed for this method, is that the material to be examined may be hardened in any of the following liquids: Müller's fluid, formalin, Heidenhain's sublimate solution, alcohol, or mixtures of Müller and formalin, or formalin and spirit, or chromic acid, or other chromium salts with formalin and spirit.

Thin sections having been cut—formalin-hardened pieces on the freezing microtome, and Müller ones, especially if over-hardened after celloidin-embedding on the sliding microtome,—they are stained for twenty-four hours in the cold, or for a few minutes with heat, in polychrome methylene blue. In order

to ensure permanence, they are now left in distilled water for twenty-four hours, only one change of water being made. A glycerine-ether mixture is used to decolourise, and the process is best carried out on the slide : the length of time required for this varies with the hardening agent and the length of time that hardening has been going on ; it varies from half to ten minutes. The decolorant being poured off, it is then very thoroughly removed by absolute alcohol, which must be frequently changed ; the alcohol in turn is removed by origanum oil likewise frequently changed. At this stage blotting-paper may be used with advantage between each renewal of the clearing agent. When, by these means, both the glycerine-ether mixture and the alcohol have been thoroughly removed, the specimen is mounted in balsam.

The methylene blue and the glycerine-ether mixture, the formula of which is not published, can be obtained from Grübler of Leipsig.

I have preparations, now nearly six months old, which show every detail as clearly as when first mounted ; but in this, as in all other cases where aniline dyes are used, I keep the specimens in boxes and avoid exposure to light.

Formalin-hardened specimens have acquired such a bad name with regard to permanence that one looks with special interest to see whether preparations stained by this method will be more permanent than the ordinary Nissl specimen is said to be. I must say, however, that though the great bulk of formalin-Nissl preparations fade, yet a few do not do so, and probably with more experience we shall be able to render them all more permanent. The oldest specimens that I have prepared by this method (U. P. M. B.) were hardened for a fortnight in Müller-formalin, and afterwards hardened for a month in Müller. No alcohol was used.

Coming then to the appearance of the sections with different hardening agents, we find that formalin preparations stain with great brilliancy when the hardening has not been too long ; but even when it has lasted as long as ten months good results can still be obtained, though in such a case the ground substance of the cells becomes slightly tinted, and the axis cylinders and neuroglia cells and fibres stain pale blue. The Nissl chromatophile bodies stain a blue purple, closely resembling that given by thionin. The myelin sheath of the nerve-fibres occasionally

stains red, a result possibly due to water which has not been thoroughly removed. In alcohol and correctly hardened formalin preparations, there is almost complete decolorisation of everything but the nerve-cells.

Müller-formalin preparations show the Nissl granules perfectly in blue, but, in addition, stain the axis cylinders a deep blue and the myelin sheaths a lighter blue; the neuroglia and blood corpuscles stain a greenish tint. Such preparations give an appearance like a poor Weigert-Pal section, but for the study of the grey matter they are much superior. Transverse sections of nerve-fibres show the outer part of the myelin deeply stained as in a Weigert-Pal specimen, but it is clearly seen to be composed of a honeycomb-like structure, probably the same as that known as neuro-keratin.

Addendum (June 3rd, 1899).—At Chester, in February, I expressed the opinion that the nerve-cells, in preparations hardened in Müller's fluid, showed the Nissl granules extremely well; that this is an error further experience has convinced me. I have experimented in numerous ways with preparations of canine and human nerve-cells of various regions with complete failure in this respect. Drs. Leuthlen and Sorgo, however, have distinctly stated that these preparations did so stain, and the first specimens with which I experimented myself supported their view. One of these was shown at the Chester meeting. The error had crept in through an omission in my notes, which I hope may be considered excusable. The specimen was placed for twenty-four hours in formalin, but at the end of that time I changed my mind with regard to the fitness of this reagent for the purpose I had in view, and placed it in Müller's fluid without making any note of the previous stay in formalin. Thus the cells were fixed in the twenty-four hours, and the after-hardening for several months in Müller has not in any way produced deterioration; moreover I incline to think that specimens so prepared present points of superiority over those hardened in the usual way of mixing equal parts of formalin 10 per cent. and Müller's fluid.

Dr. Hamilton Wright has been good enough to draw my attention again to decolourising with aniline alcohol. This reagent, when used for sublimate or alcohol-hardened preparations, is slow and tedious, though giving good results, and I had previously discarded it on that account. I find that for formalin specimens of the cortex it is superior to the glycerine-ether mixture, which acts too vigorously, and that excellent results can be obtained by its means.

The Care of the Epileptic.

By John R. Lord, M.B., Assistant Medical Officer, London County Asylum, Bexley, Kent; late Assistant Medical Officer, London County Asylum, Hanwell.

Introduction.

In introducing the subject upon which I have the honour to address you, I am actuated rather by a desire to raise a dis-

cussion than to state any new theory or fact. It is some time since the "Care and Treatment of the Epileptic" was discussed at a meeting of this Association. Since then, and more particularly recently, there has been a further broadening of our ideas as to the sphere of work of alienists, and attention directed to the conditions of life of classes of people with whom we are not in touch in our routine daily labours. This has followed upon, and in some degree been associated with, the widening of our ideas as to the mental states we include under the term "insane," and certifiable as such, a consideration which is in part answerable for the so-called increase of lunacy.

Probably we best define an insane person when we say that he is one who, owing to perverted or deficient mental powers, the result of functional or organic disease of the brain, cannot adapt himself to his natural environment, and whose conduct is not in a sufficient degree guided and restrained by the ordinary safeguards of society, and who thereby needs special care and control. By such a definition we include a section of those who at present are known as habitual criminals and drunkards, and who are, as years go by, coming more and more under our cognisance, and who promise to do so in a much greater degree in the future. It also includes a section of the degraded women who, for immoral purposes, patrol the streets of the world's great cities, and who fall to this means of livelihood more as a result of a mental predisposition, rather than of a vicious and unfortunate environment. It also includes a section of those afflicted with epilepsy.

There is, however, a tendency in these days for alienists to interest themselves in the conditions of life of those who need special care and treatment owing to bodily rather than mental infirmities. It is a well-accepted maxim now that there is a close relationship between mental and physical disease. We are well aware that various bodily disorders are liable to follow upon mental disease, and also that the converse holds good only in a less degree. There is, therefore, every excuse from the point of view of the prevention of insanity for our inquiry into the surroundings of those afflicted with bodily disease, especially when of a cerebral or cerebro-spinal nature, or of those suffering from other disorders that run a chronic and even a life-long course. This applies in a special degree to those epileptics whose mental condition can to a greater or less extent be called

"sane." I therefore, on this occasion, propose to include both sane and insane epileptics in my remarks. I had hoped to have been in a position to direct your attention to the success or non-success, the advisability or inadvisability of drug treatment, and to mention more particularly the effect on epileptics of some of the recent forms of bromides and other remedies. The incompleteness of these observations has decided me to abandon this part of my paper, and to reserve it for a future occasion.

Accommodation.—The question of proper accommodation for the insane epileptic is one of some difficulty, but there are several considerations which ought to guide us.

1. *The type of epilepsy we have to deal with.*—There are several well-recognised types of epilepsy in our asylums. The classification, at present much in vogue, of epilepsy into congenital and acquired is, I think, by no means sufficient, and some greater differentiation is necessary from the points of view both of administration and treatment. Speaking generally, epileptics are too often looked upon as merely chronic lunatics, and treated and accommodated as such. I would plead, what has often been pleaded before, for a more individual treatment, and this can only be obtained by the use of a better classification, carrying with it, as it would, a closer inquiry into each individual case. The classification adopted should, as far as possible, have a close relationship with the probable cause of the epilepsy.

(*a*) Some cases are obviously due to coarse cerebral lesion, a lesion which may be acquired or congenital. Commonly it is acquired, such as localised softenings, injury, syphilitic growths, &c.

(*b*) Other cases appear to be due to chronic alcoholism, or to the circulation of a virus such as syphilis, or a poison such as lead, &c., without any sign of localised cerebral disease.

(*c*) Others, still, are true hysteroid cases, so far incurable as to need consideration with true epilepsy.

(*d*) Another group is that of congenital epilepsy, with which is frequently associated congenital imbecility; no signs, however, being present which would indicate a definite cerebral lesion.

(*e*) And finally there is that group of cases to which no cause can be assigned, commonly called "idiopathic," and whose pathology is still hidden in obscurity.

It is obvious that a grouping of epilepsy such as this would be of great help to us in the question of accommodation. For example, in the coarse lesion cases most of the patients suffer from various pareses and need infirmary accommodation. The syphilitic cases ought to be curable; if not, they very soon develop gummata of the brain or thickening of the membranes. As a rule they, like the coarse lesion cases, ought to have infirmary accommodation. The alcoholic cases vary according to the sex. The female cases are commonly very insane. My colleagues on the male side report cases which would probably do in colonies.

2. *The degree of affection of the mental faculties.*—Some epileptics are always very insane, suffering as they do from various special sense perversions and delusions. In a proportion of these the occurrence of the seizures makes but little difference. They are lunatics, as it were, apart from epilepsy. To others, however, of this class, the fits are serious events in their existence, causing great exacerbation of their mental symptoms. The quality and type of the symptoms of mental disease, and the extent to which they are influenced by the occurrence of the fits, will guide us in providing suitable accommodation. The most difficult to deal with are those who are comparatively, if not completely, sane between their fits. The unfortunate condition of these people has led the London County Council to arrange some special means of accommodation, so as to remove them from their asylums. But more of this anon. Others, still, are in varying degrees demented and stuporose; some capable of being employed, many not, and with regard to whom, the occurrence of the fits has results which differ in intensity and degree.

3. *The question of suitable employment.*—I think I am correct when I say that it is the almost universal experience with those who are in touch with epileptics in the various colonies, that the fits tend to disappear during working hours. Apart from this, however, good bodily health is surely an important factor in an epileptic's career; and in cases where it is possible, suitable employment is an important means to this end. From a mental point of view, there is probably nothing worse for the epileptic than to keep his mind unoccupied, encouraging him to brood over his unhappy fate, and to await with morbid patience his next visitation, and hastening, what is unfortunately

in many cases a blessing, the onset of dementia and mental death. Thus it is necessary, and even our duty as guardians of this class of people, to provide them with suitable bodily employment and mental recreation. Another consideration—an economic one, and one of some importance in these days of heavy taxation—is that by these means they contribute in some degree towards their own maintenance. There is a difficulty in some cases in providing suitable employment. The most remunerative would probably be that to which the epileptic had already been trained. This may, by reason of his epilepsy, be no longer safe, and it may be necessary to teach him a new one. In many cases, however, the early onset of epilepsy may have precluded his training in any special branch, and it may be again necessary for us to undertake his education in some line of employment suitable to his condition, having regard, as far as possible, to natural aptitude and inclinations.

From the point of view of employment, undoubtedly colonies offer the greatest advantages. Many trades can there be carried on with considerable monetary success. The engaging in agricultural pursuits is a very suitable form of occupation for both male and female epileptics. Apart from the farm, most colonies provide facilities for the pursuit of such occupations as carpentering, mat-making, wood-carving, tin toy work, &c., in which, to some extent, the women can also be engaged. For the women there is always much necessary work on more domestic lines, such as sewing, general cleaning, laundry-work, &c. One must remember, however, that few occupations are without elements of danger to the epileptic, risks which are, perhaps, best met by providing an abundance of supervision, which can, in some degree, pay for itself by the engaging of artisan attendants.

4. *Bodily health and cause of death.*—I have already laid considerable stress upon the encouragement of good bodily health in epilepsy, but there are some other points I should like to mention before I leave this aspect of the subject of accommodation. On looking up statistics as regards the cause of death in asylum epilepsy, I find an unusual and disproportionate amount of lung disease, and especially phthisis.

The statistics were as follows ·

Epileptics dying from lung disease : females, 36 per cent. ; males, 28 per cent.

Epileptics dying from phthisis: females and males both 17 per cent.

Total death-rate from phthisis at Hanwell, 10·9 per cent.

Total death-rate from phthisis at the combined London County Asylums, 11·5 per cent.

The latter stands next to status epilepticus in frequency. At the Craig Colony during 1898 five out of the fourteen deaths were from phthisis.(1)

Another point I would mention is that I have calculated the average life of epileptics in asylums to be of some forty years' duration, as compared with from fifty-one to fifty-three, which is the average duration of life of the patients of all classes in the London County Asylums.

Mean age at death of epileptics: females, 40·32; males, 40·75.

Mean age at death of patients of all classes at the combined London County Asylums: females, 49·32; males, 53·82; both sexes, 51·46.

As regards the amount of phthisis in epilepsy, I do not know whether your experience will bear me out in this. Perhaps it is that the vasculo-respiratory disturbances in the lungs caused by the fits destroy, in some degree, the vitality of the respiratory organs. I cannot help but think, however, that it may point to some deficiency in the amount of air space we allow to epileptics. As before stated, many epileptics are, by reason of their bodily infirmities, entitled to infirmary accommodation as much as any patient we have, and without going as far as to say that the same holds good in all cases of epilepsy, I think that the fact of the existence of this latter morbid condition ought, in some degree, to be considered in allotting air space to this class of asylum patient, particularly in the dormitories. From this point of view colony life again offers many advantages.

Whatever we have had to say regarding an improved accommodation for the asylum epileptic may be said with increased force of the sane epileptic. He is in many cases rendered incapable of maintaining himself, and is extremely handicapped in the struggle for existence. There is nothing for him, particularly if he belongs to the poorer ranks of society, but to remain a troublesome burden to his friends, or to seek admission to the workhouse, until he shows symptoms of insanity, and

then and not till then does the country interest itself in his welfare. In the meantime, in the majority of cases, his condition has become hopeless, and the time when some attempt could have been made, with reasonable hope of success, to cure his disorder has been lost, and even spent in many cases under conditions which tend to aggravate his epilepsy and to hasten his downward career as regards mental life.

From our point of view, it is the wasting of the time between the onset of his epilepsy and the appearance of his insanity that is so much to be deplored. During this period we are helpless, and our aid is not sought, unless to save him from prison or the hangman's rope after a deed of brutality.

Without going to the extreme, and saying that no epileptic should be at large, I would state that means ought to be provided to ensure his proper care and treatment, when these cannot be provided by his friends and relatives. In other words, all epileptics ought to be under proper care and treatment, and to a certain degree under control, and if this cannot be supplied by the friends and relatives, then, both for the patient's own sake and for the sake of the community in which he resides, the interference of the public authorities is desirable. These, by the foundation of special institutions and other means, can supply the requisite care and treatment.

A great and worthy movement has sprung up within the last few years to relieve in some way the painful and pathetic conditions which surround the life of the sane epileptic. The movement up to now has been mainly of a benevolent character, but other motives, of a more economic kind, have added themselves. It is the latter I would specially bring to your notice. There are many arguments in favour of the early securing of the epileptic.

(*a*) *For the patient's own sake.*—You will I am sure be disposed to agree with me when I say that any measure which will withdraw the epileptic from chances of alcoholic and sexual excess will greatly be to his advantage. I do not think there is anything more likely to aggravate the epileptic's condition than alcoholic excess. It is a striking fact to me that, out of the nine idiopathic epileptics over forty years of age under my care, no less than six suffer from definite coarse cerebral lesion, probably due to arterial degeneration. I cannot think that epilepsy alone can be answerable for this, and in all probability we must put

down such degeneration to alcohol which seems to have effects of a more exaggerated character in epileptics than in other people. One cannot, however, totally exclude syphilis from these cases. I would like here in this connection to mention the desirability of carefully going into the history before coming to the conclusion that the epilepsy is the result of chronic alcoholism. Some cases undoubtedly are ; in others, which are admitted with strong alcoholic histories, it will be found that the epilepsy commenced before the drinking habits, and that the latter has probably hurried on the symptoms which have caused entry to the asylum. It is well known that soon after the onset of epilepsy there is a liability to increased emotionalism, a lack, as it were, of control of the affective faculties, a change which frequently results in domestic quarrels and disturbances, and which is calculated to excite the epileptic to attacks of violence. These mental disturbances, which are prejudicial to the epileptic's recovery, would never occur if he were situated in other conditions of life. Another important point tending to his ultimate recovery is the provision of suitable mental and bodily employment. This is a most important point, and, to quote the *Charity Organisation Review*, October, 1897, the real character of the work done by epileptics is *curative* not *remunerative*. From all points of view colony life offers the greatest advantages. There the epileptic lives in conditions of life where not only does he obtain suitable medical treatment, but his surroundings are such as to encourage good bodily health, and to stimulate him to engage in useful occupations ; and, moreover, he is prevented from indulgences which are disastrous to him bodily and mentally ; he is protected in some degree from the accidents he is always liable to, and is comforted by the companionship of fellow sufferers, so much so that his epilepsy loses to him the prominent position it once occupied, and obtains the character of a minor every-day occurrence.

(*b*) *For the community's sake.* — Arguments can also be offered from the community's point of view. By removing the epileptic from the streets we obviate the unsightly occurrence of fits ; but this is a minor point when we consider that, by sending the epileptic to colonies, we remove from the community a useless and burdensome individual and put him in circumstances where there is little chance of his reproducing his species. Thus in two ways do we adopt measures tending

towards the prevention of insanity, for not only do we render a useless individual in many cases an industrious one and delay his insanity, but we prevent the begetting of offspring who are liable to insanity, epilepsy, criminality, and tuberculosis. The advisability of epileptics not reproducing was recognised as far back as the sixteenth century, when the Roman Catholic Church in France forbade the marriage of epileptics.

Another point I would mention is the prevention, or rather the protection of the community from deeds of violence and brutality, the result of post-epileptic automatism, or the more conscious epileptic emotional disorders. Thus, again, we see that the providing of suitable accommodation for the sane epileptic is an extremely important question, for not only is it for the epileptic's own good, but also for the well-being of the community at large.

I will now proceed to mention some of the recent developments as regards proper care and treatment of the epileptic, which are partially the result of private interest and benevolence, and partially—and this is a most encouraging fact—the result of the education of public bodies to the importance of the question.

In 1889 there was founded at Maghull, near Liverpool, a "home" for epileptics.(2) It was designed to receive sane epileptics of both sexes, and has fulfilled its mission admirably. It is a "home" in the true sense of the word rather than an institution, and is managed by a matron and a staff of nurses. At first there was no male attendant, and the question was raised in the Press as to whether male patients should not be managed by male attendants. The nurses managed the male patients so well—much better, in the committee's opinion, than male attendants could do—that it was only to satisfy outside opinion that a male attendant was engaged. He is, however, kept as much in the background as possible, but is at hand to protect the nurses in case of a temporary insanity occurring. This institution provides accommodation for about 119 patients, the males predominating by about ten. Like many similar institutions on the Continent, it receives patients of three grades—first, second, and third classes, who are paying patients. It is also partially supported by voluntary subscriptions and donations. Some of the patients (male and female) are employed on the farm, others (male) at joinering, &c. The

remainder of the women find plenty to do in the laundry general cleaning, knitting, sewing, &c. Marked improvement, both as regards the epilepsy and general health, is reported :— "They lose the vacant or sullen look they often wear at first, and become bright, cheerful, and anxious to be noticed and to be useful." The average number of fits per annum for males is 141, for females 162. On examining the records of the male patients who are or have been inmates, out of 180, in ten the attacks have ceased for periods ranging from a month to two years, twenty-four are very much improved (fits less by fifty per cent.), thirty-nine are improved, seventeen stationary ; in fourteen the attacks have increased, and in six the stay was too short to show any result. As regards the males, 172 have been under treatment ; in 110 the attacks are lessened, in thirty they are stationary, in sixteen the attacks increased, and twelve have died. During 1897 there were thirteen patients who had not a single attack. The improvement in mental condition has been no less striking than the improvement in bodily condition. A paragraph in the medical report for 1897 is worth quoting :

"As far as medicine can relieve the condition, the patients are relieved, but not at the expense of health, strength, and happiness, as is exemplified again and again in the miserable wrecks we occasionally receive, whose well-being has been sacrificed and their lives endangered by being dosed by one or other of the quack remedies advertised in the papers."

In this connection I would enter a protest against the unrestricted sale of the so-called "fit" remedies. Their danger was vividly illustrated at an inquest at Southport the other day. I will read you the report (*vide* daily papers, April 12th).

"At an inquest at Southport yesterday on the death of an epileptic named Charles Ellis, the jury made a strong protest against the unrestricted sale of certain fit remedies. Medical analysis showed that deceased had been daily taking 150 grains of potassium bromide in the form of a certain 'fit remedy,' and the jury returned a verdict of 'Coma, accelerated by overdose of that drug.'

"The coroner remarked that but for a legal difficulty a verdict of manslaughter would have been returned."

Mr. Grisewood, the Hon. Sec. of the Maghull Home, writes me as regards the mental condition of the inmates :

"In some cases the mental powers seem to be more affected as the patients get old, but only in one case have we had to send a patient to an asylum."

The "Home" has to be congratulated on this fact.

The next departure was the establishment of the Meath Home for Epileptic Women and Girls, at Westbrook, Godalming, Surrey.(3) It exemplifies in a practical way the well-known interest the Countess of Meath takes in this question, and of whose benevolence it was the outcome. Again the medical report for the year shows much improvement in the patients' condition, both mentally, physically, and also as regards their epilepsy. The institution is a small one but a useful one, and one which has had excellent results. The industries last year again showed an actual profit. Out of the twenty patients who left the institution only one developed insanity.

It was not, however, until 1894 that, apart from these two small "Homes," any attempt was made on a large scale to provide accommodation for the sane epileptic. In August, 1894, through the munificence of Mr. Passmore Edwards, the National Society for the Employment of Epileptics opened the first house of what will eventually be a large epileptic colony at Chalfont St. Peters, in Buckinghamshire.(4) It was founded (1) to remove the epileptic from town to country; (2) to give him regular employment; (3) to encourage a well-ordered and regular existence with avoidance of excitement and abstinence from alcoholic liquors and to supply him with an abundance of nourishment of a simple nature. The colony opened with nine colonists—a small beginning. In 1895 there were thirty-six colonists, and by December, 1897, they had increased to forty-eight—thirty-six males and twelve females. The men were accommodated in two houses—each containing eighteen, and twelve women found a home in the "Eleanor House," which was opened in 1897. During the past year the average number of colonists has been fifty-five, and it is hoped to increase the sphere of usefulness of the colony during the present year by providing accommodation for children. When the additional homes now being built are opened the accommodation will be for nearly 200 epileptics.

I have scarcely time to describe the daily lives of these colonists. It is one which is conducive to good bodily health,

to retention and even improvement of mental faculties and to alleviation of the special malady from which they suffer. The matron and her staff are responsible to the committee for the welfare and good order of the colony. Each colonist engages in such occupations as are considered suitable, and takes a willing part in the work of the house when required. The work provided in the women's department includes laundry work. The usual working time is about seven hours a day; but this, however, is regulated by the colonist's health.

Games and amusements of various kinds, both indoor and outdoor, are provided during hours of recreation. The colonists are under observation and remain within boundaries except when accompanied by a member of the staff or by friends visiting. The dietary is under the supervision of the house-visiting physician. Stimulants are prohibited, and the necessity of total abstinence impressed upon the patients when away from the colony, either temporarily or permanently. Each colonist, if his or her conduct is good, receives a small sum weekly as pocket money. Smoking is prohibited during working hours. The colonists sleep in dormitories each containing about nine to twelve beds, and an attendant sleeps in an adjoining cubicle overlooking the dormitory, in order to be at hand to give assistance in the event of a colonist having a fit during the night. Church of England and Nonconformists' services are held, as a rule, weekly, and arrangements are also made to enable colonists to go occasionally to services in the adjoining village.

The colony is, to a certain extent, becoming "home made." The new laundry building near the ground is almost entirely the product of colonist labour. Non-epileptic labour was used for the higher parts. Under a dozen are employed in the building department at carpentering, plumbing and painting, bricklaying, &c. The remainder are chiefly employed in farm and garden work. The last report to hand shows the farm to have been a considerable success financially; the same, however, cannot be said of the garden account. The medical report is a most encouraging one. A marked improvement has been noted in the majority of cases both in general health and as regards the epilepsy.

"On the whole the mental state of the colonists, considering the duration of the disease, is good. In a small minority there has been a

steady downward tendency towards dementia, apparently the direct effect of the disease."(4)

Mr. Penn Gaskell informs me in a letter that—

"Only one person has actually become insane at the colony. A few others, however, had on leaving the colony deteriorated mentally, to an extent which made it probable that they would eventually become insane."

As regards the epilepsy,

"In the majority a marked diminution in the number of the attacks is observed after admission to the colony. In the minority there is a temporary increase in the number of fits, which may be due to the fact that previous to admission larger doses of bromide have been taken, this being entirely withdrawn except for a small dose at bedtime."(4)

Up to 1898 there has been a complete immunity from those accidents to which epileptics are liable. We trust that the necessary means may be forthcoming to enable the executive committee of the colony at Chalfont to complete the houses now building, and to start others when possible, so that it may in a greater degree fulfil the purposes of its benevolent founders.

Since establishment of this colony the question of a proper accommodation for the epileptic has become much more acute in this country, and has been the subject of some agitation. Its importance was recognised when the Manchester and Chorlton Joint Asylums' Committee appointed two of its number (Dr. J. M. Rhodes and Alderman A. MacDougall) to visit the various asylums and colonies in Belgium, France, and Germany, the description of which, together with their conclusions, were embodied in a report which was published in book form in 1897. They condemned the treatment of epileptics, idiots, and the feeble-minded in workhouses, and recommended that (1) the epileptic and imbecile (20 per cent.) who are mentally and bodily sick should be provided for in pavilions similar to the Wilhelmina Augusta Pavilion at Alt-Scherbitz; (2) that those of the same class who are not physically incapable (80 per cent.) should be provided for in homes on the colony plan, and not more than thirty persons should be placed in each home; and finally that provision should be made for those able to pay a proportionate sum towards their maintenance. The practical outcome of this was the resolve on the

part of the Manchester and Chorlton Unions to establish a "colony" for imbeciles and epileptics. The scheme is yet only proposed, but they hope soon to acquire some 250 acres near Rivington, Lancashire, and to build there an asylum something on the Alt-Scherbitz style. The estate is divided by a public road into two parts, one of about 150 acres, the other about 100 acres. The former will be used for the imbecile and the insane epileptic, and the latter for the sane, on which they propose to place some 250 cases. Other details are not yet quite decided upon; Dr. Rhodes, the chairman, however, who has taken up the question in a thorough manner and made it peculiarly his own, has been good enough to give me some hints. The asylum will probably be run on similar lines to the Wuhlgarten Asylum, near Berlin. A structural point I would mention is that it is proposed to have inclined planes instead of staircases, a desirable improvement, and one cannot help agreeing with Dr. Rhodes when he says—

"That it is not the height of the fall that usually injures the epileptic, but the impact against a small surface like the edge of a stair."

Artisan attendants will be employed if good ones can be secured. Dr. Rhodes is with me in the hope that provision will be made for pathological work at least equal to a good asylum laboratory. The cases they propose to deal with are all of the pauper class.

Another praiseworthy departure also comes from Lancashire. Dr. Rhodes and others have at last prevailed upon the Lewis Trustees to provide a colony for sane epileptics. They have purchased 460 acres of good land at Chelford upon which, to start with, they hope to place some 200 to 300 cases. The plans are being prepared by Mr. Graham, of Regent Street, London, and the institution, its promoters hope, will be as perfect for its size as any in existence. It is proposed to go in for gardening on a large scale, together with bookbinding, tin toy making, basket work, and mat-making.

The Lancashire Asylums Board have also appointed a small committee to inquire into the treatment of those suffering from mental diseases, with instructions to visit any country where they can gather useful information. The result of this departure will be looked forward to with some expectation.

The movement in the question of epileptic accommodation

by the Manchester and Chorlton Unions has, no doubt, been carefully noted by other unions. Its good effect is apparent, and one large union is already following in its footsteps. The Leicester Board of Guardians are moving in the matter, and the Local Government Board's sanction to the acquisition of land for the purpose of providing a better accommodation for epileptics and imbeciles has already been obtained. No scheme has as yet been decided upon, and the guardians are at present engaged in obtaining information.

The latest scheme, however, is that of the London County Council, who have decided to build at Horton a "working colony" for insane epileptics. The land is already in their possession, and consists of some 127 acres, being part of the Horton Manor estate, purchased by the Council two or three years ago. Upon this it is proposed to erect detached buildings, each to accommodate thirty-six male epileptics and three attendants, about 300 in all. There will be an infirmary for the reception of patients during periods of mental alienation and excitement, &c. The patients are to be suitably employed, and by this means it is hoped they will to a certain extent contribute to their own maintenance. The London County Council has under its care some hundreds of epileptics, some practically sane between the epileptic periods, and others capable of doing a good day's work if suitable work is found. The scheme has a sound basis, and will result not only in a more economical method of dealing with their epileptics, but in promoting health and happiness amongst a class of people whose mental and physical energy is hidden or wrongly directed in the asylums.

This proposal of the London County Council has given rise to some criticisms. The *Lancet* for December 24th, 1898, remarks that—

> "It would seem to be an even wiser use of public money than that suggested by the London County Council if some were laid out on institutions similar to the one at Chalfont, where sane epileptics are taken with some hope that they may thus be saved from drifting into the class of insane epileptics."

Again in the *Times* of the 6th December, 1898, a correspondent expresses the hope that the proposed colony will receive the epileptics who are now to be found in the workhouses. Mr. Montefiore Micholls, of the National Society for the Employment of Epileptics, points out, however, that the London

County Council has no power to devote money for the accommodation of sane epileptics. I do not know to what public bodies the Local Government Board can grant an order in this matter; perhaps some member present can shed more light on the point than I can. It can, however, issue an order to the union authorities. Few unions have, of themselves, a sufficient number of epileptics to warrant them building special institutions, and the proposal by Dr. Rhodes that unions should unite for this purpose is the best one and the one adopted at Manchester. Arrangements could be made for the reception at such institutions of patients from unions where the number of epileptics is so small as to not allow of their contributing to the building fund of such institutions.

Statistics and cost of maintenance, &c.—To arrive at any certain conclusion as to the number of epileptics, adult and children, in this country is impossible, owing to no census having been taken. We can therefore only make rough estimates from Poor Law and School Board statistics and statistics from other countries. I do not propose to enter into this with any degree of fulness; the work has already been admirably done by Dr. Turner,(5) who gathered together what few statistics were available. Briefly, I may state that probably 1·5 per 1000 of the population are epileptic. This does not include insane epileptics. Even considering the proportion of epileptics to be 1 per 1000 of the population, the number in the Metropolitan area would be about 4000. It is also calculated from the returns of the Poor Law institutions of London that one out of every five is an inmate of a workhouse.

I have not had time to obtain statistics as to the number of insane epileptics. The number must be fairly large when we consider that they average 7·9 per cent. of the total yearly admissions, the actual number being on an average 1412 per annum.(6) The following table shows the condition of the London County Asylums (7) as regards epilepsy:

	Males.	Females.	Total.
Patients of all classes . . .	4811	6983	11794
Congenital epileptics . . .	63	92	155
Acquired „ . . .	544	421	965
Epileptics of both classes . .	607	513	1120

In percentages these are—

	Males, per cent.	Females, per cent.	Both sexes, per cent.
Congenital epileptics . .	1·307	1·31	1·3
Acquired „ . .	11·307	6·02	8·18
Epileptics of both classes .	12·616	7·34	9·49

This latter table shows the predominating number of acquired epileptics to be in the males, the congenital epileptics being fairly evenly divided. This has an important bearing on the question of drink and epilepsy.

Some information as to the foundation cost per bed, and the cost of maintenance in epileptic institutions, would perhaps prove of interest. As would be expected, the former has varied at different places, according as to the source from which the requisite money was drawn. At Chalfont it was £140 per head, which includes £20 for furniture; at Alt-Scherbitz, £142; and at Wuhlgarten, probably the most expensive, £235. Taking these three as fairly representative, a good colony should not cost above from £150 to £200 per bed.

The cost of maintenance is more difficult to state. At Chalfont during 1898 it averaged 12*s.* per week (£31 4*s.* per annum). This did not, however, include the profits on industries, which would have made it much less. The annual *per capita* cost allowed by law at the Craig Colony is $250 (£51 0*s.* 10*d.*). Dr. Spratling writes to me that for some years the actual cost will exceed this, owing to the fact that the corps of officers and employés is sufficient for a population of 1200 or 1400 patients. During the past year the actual cost has been $258 (£52 13*s.* 6*d.*) per head, excluding value of food supplies, &c., grown on the premises. Inclusive of this the *per capita* cost has been $174 (£35 10*s.* 6*d.*). At both these colonies it is expected that as the number of patients increase the cost of maintenance will go down. At the Craig Colony it is hoped that in a few years only some $100 (£20 8*s.* 6*d.*) per head will need be granted from the State Treasury. At Bielefeld the cost per head for third class patients is 500 marks per year (£38 10*s.* 10*d.*). No epileptic colony is therefore at present self-supporting; whether such is possible time alone will show.

My paper would be incomplete if I did not touch upon the

excellent institutions in America and on the Continent.[8] In America the Ohio Hospital claims the distinction of being the pioneer institution of its kind. In Ohio, as far back as 1879, a bill for the establishment of separate institutions for the accommodation of those suffering from epilepsy almost became law. It was not, however, until 1890 that such a bill was actually passed. The hospital was opened for the reception of patients in 1893, and consisted then of thirteen cottages. It was designed to admit both sane and insane epileptics. Other cottages have since been added, and by January, 1899, it was hoped to be able to accommodate some 900 people. The institution now consists of eleven cottages, containing from fifty to seventy-five beds each ; a laundry cottage for seventy-five patients ; one cottage for the insane accommodating 200 ; a school house ; an industrial building ; a kitchen bakery ; two large dining rooms ; stores, and other administrative departments. The additions proposed are a dairy, a residence for agricultural patients, two hospitals, shops of various kinds for ordinary industries, a chapel and an amusement hall. Great improvement in the condition mentally and bodily of those already admitted is reported.

Institutions for the same purpose have been established in Pennsylvania, New Jersey, California, and Massachusetts, but the most notable has been the establishment of the Craig Colony at Sonyea, New York State.[9] This institution was opened in February, 1896, and is magnificently situated in the Genesee Valley. The landed property is everything that could be desired, consisting as it does of well-cultivated fields, fine orchards and pastures, and productive market gardens. On the grounds are good quarries of building-stone, fine deposits of brick clay, and acres of good timber. The colony is as yet only in its infancy, but when finished will present the picture of a community living in surroundings identical with an English rural village. Advantage has been taken of the natural beauty of the landscape in planning the village green, paths, lanes, shops, cottages, chapel, dairy farm, and schools, &c. Agriculture, floriculture, and market-gardening form the main employment for the colonists for at least six months of the year. Both sexes are employed in this fashion. The colony is partially self-built, and the capacity of the brick-making plant is about one million per

year. I can only spare time to mention two prominent features of this colony. The first one is the establishment of a training school for nurses. The course, besides the usual "first aid" and "nursing," includes special instruction in the care of epileptics and the correct observations and recording of the seizures. This latter is of some importance when we remember that it is frequently some time before the medical officer is fortunate enough to be present at the time of the fit. The other point is the elaborate provisions which are being made for the clinico-pathological study of epilepsy. No expense or trouble is being spared in this direction, a proceeding which, it is to be hoped, will be emulated in the proposed colonies in this country.

Before I leave America I would mention, as an example of the seriousness with which that country regards this question, that it is proposed this May to call representative alienists and neurologists together, and to form a "National Society for the Study of Epilepsy and the Care and Treatment of the Epileptic." This departure owes its origin mainly to the praiseworthy energy of Dr. Spratling, the Superintendent of the Craig Colony.

As you would expect, the Continental institution I would not fail to mention is the Bethel Colony for Epileptics[10] at Bielefeld, near Hanover, Germany, the pioneer of epileptic colonies. Nearly thirty years ago the Pastor von Bodelschwingh purchased a farm with one house, and, imbued with the idea of establishing a refuge where those suffering from epilepsy might find the environment most suited to their peculiar condition, and, if not to cure them, at least to benefit them both mentally and bodily, took under his care, as a commencement, four epileptics. From this humble beginning there has grown a community of over three thousand souls—a little nation in itself, living lives of happiness, prosperity, and contentment. The colonists are lodged in cottages, some sixty or more in number, under the immediate care of "house fathers and mothers" and "deacons and deaconesses." Many branches of industry are carried on, apart from the farm, nursery-garden, &c. Such trades as cabinet-making, shoe-making, tailoring, basket-making, brick-making, pottery, tin toy work, book-binding, and printing all have their employés. For men alone there are no less than thirty different callings. One small

cottage is set aside for those mildly insane; the worst cases, however, being sent to asylums.

Although the evolution of a rational method of treating the insane and feeble-minded was late in starting in Germany, much behind this country and France, yet the Germans bid fair to outstrip us, at least as regards their treatment of the pauper epileptic class, sane and insane. They have, besides Bielefeld, splendid institutions at Alt-Scherbitz, Uchtspringe, Dalldorf, Wühlgarten, and others in the process of erection. The same can be said of America.

We are comforted, however, by the appearance of unmistakable signs of activity in this country as regards this question, and it is hoped that before long we shall see springing up about us great industrial and educational institutions meeting the requirements of the epileptic and feeble-minded, ranking with those in neighbouring countries.

I have, in conclusion, to express my gratitude to Dr. Rhodes, of Manchester; Drs. Peterson and Spratling, of America; to Dr. Turner, of the Colony at Chalfont, and to the secretaries of the various institutions I have mentioned for information generously placed at my disposal.

I must also acknowledge much help generally from my colleague, Dr. Spark, particularly in the preparation of the male statistics.

Discussion.

At the General Meeting, London, 11th May, 1899.

Dr. Shuttleworth remarked that at the Colony at Chalfont it was found that occupation, even such as school occupation, is certainly beneficial in diminishing the liability of epileptic attacks in those subject to them. In his capacity as examiner of affected children at the London School Board he found that fact well illustrated. The parents generally made it an excuse for keeping children away from school, because they were subject to fits. However, they are recommended to send the child to school until it has a fit there, and then they may come for advice. It is a very rare thing indeed for such a child to have a fit in school, especially if it is admitted, as it generally is, to one of the classes of "special instruction," where there are only twenty under the charge of one teacher, and where consequently considerable attention can be given to individual cases. It is often reported by the parents that such children suffer from attacks in the night and during the holidays, but it is a comparatively rare thing for those children to have attacks in the school.

Dr. Fletcher Beach, as one of the physicians at Chalfont, thought it might interest the meeting to hear something about the procedure which is in vogue there. The colony was first started by a large meeting at the Mansion House some years ago. At that time no colony existed, except a very small one at Maghull, and another at Godalming, which only accommodated fifty inmates. It was felt that a large number of sane epileptics who were unable to maintain themselves might be accommodated with advantage in a colony where the

environment would be such as to in every way conduce to the health of the colonists. As far as males are concerned, through the munificence of Mr. Passmore Edwards a home was erected at Chalfont. There is a large farm there, and the open-air treatment which is so commonly in vogue in all asylums is adopted with very great success. The colonists are under the charge of a gardener, and not only is the farm worked at a profit, but the patients themselves have greatly improved in bodily health, and the number of fits has become considerably reduced. All the patients who suffered from many attacks of epilepsy had every night a drachm of bromide of potassium. This was the only drug administered, except such pills as might be required, and the bromide was only given to those patients whom it was thought would benefit by that treatment. Some little while ago a home was opened for females, and these were employed entirely in working the laundry. Before that the washing was paid for. They found that the mere fact of their being employed, although they are not out of doors, like the males, seemed to reduce the fits. They become fat and comfortable, and take an interest in their work. They had only had to send out one case which turned out to be maniacal, but had also had to send out some other cases whose general conduct did not conform to the rules, and who became an annoyance to the other colonists. The family system is also adopted there, that is to say, no home is allowed to contain more than twenty to twenty-five colonists. They considered that a large number together would be fatal to the treatment. The operative treatment of epilepsy had been referred to, and in this Dr. Beach was considerably interested. He had seen one or two cases in which it was thought that the cause could be found, and operation had proved successful; but in functional cases operative treatment had failed. In another case of his, a piece of bone which apparently was pressing on the middle third of the anterior frontal was removed, and for about three weeks after the fits entirely ceased; but they then recurred. He was not amongst those who believe that bromide is doing more harm than good. He had seen bromides, especially combinations, do a considerable amount of good, not only in reducing the fits, but in some cases apparently removing them altogether. As to how long the drug should be taken, he always advised, like Brown-Séquard, that it should be continued for two years after the last fit. He had found hardly any of the cases who had gone through this treatment come back again; so that he thought that the treatment by drugs, not only during the time the patient has the fits, but also during a period succeeding the fits, is a very useful thing to remember.

Dr. Ewart observed that if the London County Council started an epileptic colony, other county councils throughout England would follow them. Whenever such a colony had been started in any foreign country—Germany or America—it had always been followed by several others, showing distinctly that it met a want. The epileptic would certainly benefit by having an open-air life, and in the course of time any colony would probably pay for itself. The question of its paying did not particularly matter. County councils did not exist for the purpose of making the colonies pay; they existed for the comfort and happiness of the people. He trusted that in a short time they would see several epileptic colonies started throughout the country.

Dr. Briscoe thought that venesection was very little practised. In the status epilepticus he thought a vein ought at once to be opened.

Dr. Jones asked Dr. Lord whether he had tried Flechsig's treatment, which had been very much talked and written about; or Gelineau's dragées. Some of his patients at Claybury had used them, but he thought they were only valuable in respect to the bromide they contained. Bechterew's fluid, also, was reported to be valuable only for its bromide. It was interesting to hear that there were less fits during work and lessons. There were about 1200 epileptic insane in the asylums of the London County Council, and out of this population a certain number only could be selected for the colony; so that presumably it would begin in a very small way. His sympathies were strongly with the sane epileptic. He was not quite sure that the schemes of the Manchester and Chorlton Union were not for the sane, if they got the power, and not for the insane; but Dr. Lord could make this clear.

The Chairman said he rather forbore to mention the use of the dragées, after what Dr. Lord said about quack drugs. He did not think, however, that Dr. Jones was quite right in attributing their effects to the bromide they contain only. He had tried the combinations of bromide, arsenic, and picrotoxine, which were supposed to

be the materials mostly contained in the dragée, but never got the same effect as when using the dragée itself. This effect was sometimes notable. Amongst other cases he might mention a patient who had fits every day; he gave him these dragées, and he had been taking them for three or four years, and had never had a fit. In such cases he had not been able to satisfy himself that in curing the body they did not weaken the mind.

Dr. LORD, in reply, said that with regard to Dr. Jones' query as to Manchester and Chorlton, there were two schemes in Lancashire. The Manchester and Chorlton Union's scheme was divided into two parts, one being for the insane, and the other for the sane. Then the Lewis trustees had granted some money for epileptics. As to Flechsig's treatment, he had not yet tried it on any patients at Hanwell. As to the question of bleeding, he could not see that there was any justification for bleeding in the early stages of status epilepticus. The "vicious circle" was not formed; but when it was formed, then bleeding might do some good.

(1) *Vide Fifth Annual Report, Craig Colony, New York.*—(2) *Vide Annual Reports*, 1897-8.—(3) *Annual Report, Meath Home for Epileptics, for* 1898.—(4) *Vide Fifth Annual Report of the National Society for the Employment of Epileptics.*—(5) *Vide* "The Care and Management of Epileptics in Colonies," by Dr. Turner, *Lancet*, June 26th, 1897.—(6) *Vide Annual Report of the Commissioners in Lunacy*, 1898.—(7) *Vide Annual Report of the London County Asylums*, 1898.—(8) "Colony Care of the Epileptic," by H. C. Rutter, *Bull. of the Ohio Hospital for Epileptics*, Jan., 1898.—(9) *Vide* "Colonies for Epileptics," by F. Peterson, M.D., *Phil. Med. Journ.*, Oct. 8th, 1898; also *Annual Report of Craig Colony*, 1898.—(10) *Vide* "Care and Treatment of the Epileptic," by Dr. Rhodes and Ald. MacDougal; also "Colonies for Epileptics," by Frederick Peterson, M.D., *Phil. Med. Journ.*, 1898.

A Note on the Influence of Maternal Inebriety on the Offspring.

By W. C. SULLIVAN, M.D., and Stewart Scholar in Mental Disease, R.U.I., Deputy Medical Officer, H.M. Convict Prison, Parkhurst.

THE object of the following paper is to present the result of a number of observations touching certain aspects of the question of habitual inebriety, notably the *rôle* of maternal alcoholism as an agent in race degeneracy.

It has been observed by most authorities who have studied the various classes of individuals characterised by their incapacity to adapt themselves to normal social conditions, that these classes are largely recruited from the offspring of the alcoholic. This holds true whether that incapacity depends on the most glaring states of organic degeneracy, such as idiocy, or on those slighter forms of mental inferiority which appear to exist in at least a considerable proportion of habitual criminals and prostitutes.

Thus, to quote a few of the more recent observations on

this point, alcoholic parentage was noted by Bourneville (1) in 62 per cent. of a series of 1000 idiots examined by him; by Marro (2) in 46 per cent. of criminals; by Penta (2) in 30 per cent. of criminals; in the Swiss prisons (3) for juvenile offenders in over 45 per cent. of the inmates; by Mme. Tarnowsky (2) in 82 per cent. of Russian prostitutes.

To observations of this kind it has been objected, and with some justice, that, as parental drunkenness is one of the most easily traced antecedents, it tends to figure disproportionately amongst the causes assigned in such inquiries; and in many cases it may get the credit of determining in the stock a degenerative tendency which really existed prior to it, and of which, in fact, it was merely a symptom.

To avoid this source of fallacy and to estimate more truly the importance of parental alcoholism amongst the factors which make for the deterioration of the stock, it is desirable to adopt an opposite standpoint, and to take as the end of investigation, not alcoholism in the ancestry of the degenerate, but degeneracy in the descendants of the alcoholic.

It has seemed to me that an inquiry from this point of view into the history of the offspring of the female criminal alcoholic might not only be of interest as a contribution to the study of that particular social category, but might also furnish results applicable, with certain reservations, to the general question of the influence of parental alcoholism.

For this purpose I have selected from the female population of Liverpool Prison, amongst whom habitual inebriety is very prevalent,(4) a series of cases of chronic drunkards who have borne children; and from the history of these children, and more particularly from the indications given by the infant mortality, I have sought to illustrate the mode in which the maternal intoxication appears to have reacted on the development of the offspring.

In the selection I have endeavoured, as far as possible, to choose cases in which alcoholism occurred uncomplicated by other degenerative factors. Thus I have excluded from the series all cases in which there was a history suggestive of constitutional liability to tubercular diseases, and all cases where there was a suspicion of syphilis. I have further eliminated the subjects of markedly neurotic type who, by their specially early and violent cerebral reaction to alcohol, by their

heredity, and by the presence of other psychic anomalies, were clearly to be attached to the class of the degenerate *sensu stricto*.(5)

This process of selection avoids the more obvious sources of fallacy in such inquiries; but, of course, the general validity of the results still remains necessarily qualified by limitations due to the special characteristics and conditions of the class from which our cases are drawn.

Without discussing these characteristics in detail, it will be desirable to recall the fact that several of them are of a nature to aggravate the transmitted influence of the intoxication. Thus prison drunkards belong, for the most part, to the lowest social grade, where even moderate alcoholic indulgence implies diminution of other food supply; further, their excesses are, as a rule, persistent and intense. Another peculiarity met with in individuals of this class, and one which probably favours the transmission to the offspring of the influence of the intoxication, is the special susceptibility of their nervous system to the effects of alcohol.

In the absence of statistics establishing the relative frequency in normal subjects of the different localisations of alcoholic lesions in the economy, it is impossible to offer a definite estimate of this susceptibility, but it is unquestionable that in the criminal, as in the insane alcoholic, the nervous manifestations of the intoxication occur with notable frequency, while non-nervous disorders are relatively rare and secondary.(6)

This fact is, no doubt, an expression of that peculiarity of organisation in virtue of which these individuals' intoxication tends to issue in obtrusive disorders of conduct.

In the cases comprised in our series the special nervous localisation of the poison was very marked; thirty-one of the women had suffered from one or more attacks of alcoholic delirium, while twenty-four others, without actual delirium, had occasional visual hallucinations. Suicidal impulses, disorders of cutaneous sensibility, cramp in the extremities, were noted in a considerable number of cases.

The same determination of the poison to the nervous system with comparative immunity of the other tissues, was equally notable in the case of alcoholic relatives of our patients.

Of course, with a view to the special object of our inquiry, cases were chosen in which the inception of the drink habit

was either prior to or coincident with the commencement of the procreative career, at least not later than the first confinement.

The intoxicants consumed were in the form of beer, whisky, and rum; as a rule the patients drank any sort of liquor they could get.

(*a*) *Mortality of Infants of Female Inebriates.*—Amongst the 100 women of our series, twenty were able to give details of female relatives also of drunken habits, who had had children. Of these 120 female inebriates were born 600 children, of whom 265 (44·2 per cent.) lived over two years; 335 (55·8 per cent.) died under two years, or were dead-born.

(*b*) *Infant Mortality in Sober and Drunken Branches of the same Family.*—With a view to testing how far the high infant death-rate was in any way related to the maternal drunkenness, we may adduce for comparison the infant mortality in a number of sober families. Twenty-one of the women observed were able to give details regarding female relatives, sisters or daughters, of sober habits, who had contracted marriages with sober males, and had borne children. The drunken and sober families contrast as follows:

Drunken mothers (21 cases) 125 children, of whom 69 (55·2 per cent.) died under two years.

Sober mothers (28 cases) 138 children, of whom 33 (23·9 per cent.) died under two years.

Thus the death-rate amongst the children of the inebriate mothers was nearly two and a half times that amongst the infants of sober women of the same stock.

Of course it has to be borne in mind in considering these figures that the high mortality shown, in so far as it is attributable to alcoholism, is not solely the result of the direct influence of the intoxication on the organisms of mother and child, but is also in part a consequence of the malign modification of the environment due to the parental vice.

This latter unessential mode of influence varies in its gravity according to the normal milieu of the individuals concerned, and in the class from which our cases come is at its maximum.

We cannot accordingly assign a general validity to our statistics on this point without making full allowance for the social factor.

(*c*) *Progressive Death-rate in the Alcoholic Family.*—On the

other hand, within the limits of a given class, the infant death-rate may be taken as a fairly accurate index of the transmitted influence of the parental intoxication. In this way we may use it to test the force of that influence at different stages of the parental alcoholism. For that purpose we shall class the children according to the order of their birth, and we shall compare the death-rates in the different groups so obtained.

In eighty cases in our series, omitting instances of mixed paternity, the number of children reached or exceeded three.

Grouping these as we have indicated we get this result :

	Cases.	Dead or dead-born.
1st born . . .	80	27
2nd „ . . .	—	40
3rd „ . . .	—	42
4th „ . . .	64	43
5th „ . . .	47	30
6th „ . . .	33	20
7th „ . . .	22	15
8th „ . . .	17	13
9th „ . . .	13	13
10th „ . . .	8	6

The significance of this table will be better seen if we state the results in percentages. For this purpose, to secure a sufficiency of numbers, it is necessary to combine the figures of the smaller groups:

	Cases.	Dead and dead-born, per cent.	Dead-born, per cent.
1st born . . .	80	33·7	6·2
2nd „ . . .	80	50·0	11·2
3rd „ . . .	80	52·6	7·6
4th and 5th born .	111	65·7	10·8
6th to 10th „ . .	93	72·0	17·2

These figures illustrate very clearly the progressively augmenting character of the influence of the mother's alcoholism. From that point of view it is especially noteworthy that the rate of still-births shows almost as marked a tendency to regular increase as does the death-rate amongst children born alive.

The type of alcoholic family suggested by these results—a

type characterised by decrease of vitality in the successive children—is fully realised in many of our observations. For example, in one instance (Obs. 5 at end of paper) the three firstborn children are healthy, the fourth is of defective intelligence, the fifth is an epileptic idiot, the sixth is dead-born, and, finally, the reproductive career ends with an abortion. In another case (Obs. 10), after a firstborn child surviving to adult life and a second which dies of an infectious disease in childhood, we have two infants dying of convulsions in the first few months of existence, and after these a still-birth.

(*d*) *Influence of Early Development of Drink Habit.*—In confirmation of the results just cited, we find a sensibly higher infant death-rate in cases where the maternal inebriety has developed at an early period. In thirty-one of the women drinking habits were well established at least two years before the first pregnancy. Of the 118 children born of these women, seventy-four died in infancy or were dead-born, a death-rate of 62·7 per cent., as compared with a death-rate of 54·1 per cent. for the rest of the series.

(*e*) *Influence of Sober Paternity.*—In only ten cases of our series (omitting instances of mixed paternity) were the fathers of the children of sober habits. This is, of course, too small a figure on which to base any conclusions. In these ten cases (fifty-seven infants) the death-rate (57·8 per cent.) was practically the same as that of the whole series. If this result were confirmed by adequate figures it would suggest that, as regards the vitality of the offspring, the influence of maternal drunkenness is so predominant a force that the paternal factor is almost negligible. Such a conclusion would harmonise with the known facts regarding the gravity of inherited syphilis.

(*f*) *Influence of Inebriety of Preceding Generations.*—In thirty-nine of our hundred cases the parents of the women were, as far as ascertainable, of sober habits. Of these thirty-nine women were born 210 children, of whom 57·1 per cent. died in infancy or were still-born. The death-rate amongst the children born of the remaining sixty-one women—who gave a history of parental alcoholism on one or both sides—was 56·2 per cent.—that is to say, practically the same as in the infants of inebriate ancestry.

Of course, our method of selection excluded distinct manifestations of neurotic taint, and hence eliminated those

cases in which parental alcoholism had exercised a serious influence. Accordingly the women of inebriate ancestry who figure in our statistics would be those only who had suffered very slightly, if at all, from the action of the parental intoxication. The inference from our figures, therefore, is that, unless the fact of the drink habit were to be regarded as an evidence of hereditary influence—a purely gratuitous assumption—then their degenerative taint, if existent at all, was too feeble to exercise an appreciable effect on the death-rate of their offspring, being lost in the overwhelming importance of the direct intoxication of the maternal organism and of the embryo.

(*g*) *Influence of Intervening Circumstances.*—For obvious reasons it is possible to detect only a very small number of even the grosser and more obtrusive conditions which exercise a special intervening influence on the normal course of maternal inebriety, and tend to exaggerate or to moderate its detrimental effect. In a number of our cases, however, it was possible to trace the operation of at least two such conditions of opposite tendency, viz. on the one hand the existence of a state of drunkenness at the time of conception, on the other hand enforced sobriety owing to imprisonment during a part of pregnancy.

With regard to conception in a state of drunkenness, it is a condition concerning which, of course, positive information can only be obtained in a limited number of cases. There can be but little doubt that it is an event of frequent occurrence in the class with which we are dealing, and the small number of our instances is no index to the actual importance of this factor. So far as they go, however, our observations as to this point are suggestive. In seven cases the condition was noted, and in six of these cases the children died in convulsions in the first months of life; in the seventh case the child was still-born. In four instances the child conceived in drunkenness was the firstborn, and in two of these cases subsequently born children survived to adult life. As we have seen that in the alcoholic family the earlier born child has a relatively good chance of life, these cases seem to indicate the decided influence of the factor in question. It is further to be noted that in three of the four cases this first pregnancy occurred before mar-

riage. Possibly we should not be in error in attributing to conception in drunkenness a certain influence in the causation of the high death-rate of illegitimate children.

As to the second circumstance which I have mentioned—imprisonment during pregnancy—it is obvious that it can exercise a perceptible influence only in cases in which the incarceration extends over a considerable period of pregnancy, and occurs at a stage of the maternal career when the organic changes of alcoholism are not too far advanced. These conditions are, however, rarely united; as a rule, the graver offences which entail long imprisonment are related to a chronic alcoholism; while very rapid relapses, involving frequent short imprisonments, occur also at a late stage of the drunkard's life, and are not, moreover, in their favourable effect at all to be compared with a single long term of seclusion.

Owing to these limitations, the determining of the reality of this influence hardly lends itself to statistical inquiry; it is rather to be established by the details of individual cases. In the clinical notes appended to this paper will be found a number of such cases. In one (Obs. 5), where drinking habits had lasted about ten years, after four children dead-born or dying in infancy, a fifth child survives, the mother having spent all but the first fortnight of the pregnancy and having given birth to the child in prison; a difference of paternity, however, qualifies, perhaps, the value of this instance. In another (Obs. 4), where the drinking habit dated from the first confinement, the first child lived, the second and third died in infancy; the mother spent at least two months of her next pregnancy in gaol, and the fourth infant survived.

Similarly in Obs. 6, after the death in infancy of the first child, the mother serves eight short sentences in the early part of her second pregnancy, and then a longer sentence embracing the two last months of gestation; she is confined before release, and the child survives and develops healthily. In Obs. 2, on the other hand, though the woman was in prison during the last five months of her second pregnancy, and was confined before the end of her sentence, the infant died of convulsions at the age of a few months; in this case, however, the mother's drinking habits had commenced at the age of eleven years, fourteen years previously.

(*h*) *Frequency of Epilepsy in Surviving Children.*—In the con-

ditions of our inquiry it was, of course, impossible to ascertain with any approach to accuracy what proportion of the surviving children were nervously defective. We may, therefore, limit our attention in this respect to the determination of the frequency of major epilepsy in our heredo-alcoholics, as the symptoms of that neurosis render its recognition practicable.

Of the children comprised in our series, 219 lived beyond infancy, and of these nine, or 4·1 per cent., became epileptic. This proportion is extremely high as compared with authoritative estimates of the frequency of epilepsy in the general mass of the population. Thus Bruce Thompson ([7]) puts the ratio of epileptics to the population of England at less than 1 per 1000; while the very liberal calculation of Rayer ([8]) gives the proportion of 6 per 1000.

On the other hand, our ratio is lower than that given in other published statistics of epilepsy in the children of the alcoholic. Thus Legrain ([9]) in his observations noted 12·5 per cent. of epileptics amongst such children surviving infancy; and Demme ([10]) in thirty-two surviving children of ten drunken families found five (15·8 per cent.) cases of epilepsy.

Both these observers, however, included in their series cases in which alcoholism was associated with neuropathic heredity and with other degenerative taints. It is further to be noted that a number of the children counted in our statistics as non-epileptic had not yet reached the age at which epilepsy most frequently appears; some of these children may quite probably have developed the neurosis later.

Finally, the infant death-rate noted by Legrain and Demme (who do not specially distinguish cases of maternal alcoholism) is very much below that in our series; it is possible that their lower death-rate was in part compensated by a higher ratio of degeneracy, including epilepsy, in the surviving children. From this aspect the enormous infant mortality in the class we have examined may be to some extent a matter of advantage to the community.

(*i*) *Mode of Death.*—Of the 231 cases in our series, in which the children died under two years of age, the mode of death in 140 cases (60·6 per cent.) was stated to be by "convulsions," convulsive symptoms being also present in a number of the others who died of the common diseases of childhood.

The term "convulsions" is, of course, used in such a very

vague and expansive fashion in assigning the cause of death in infancy that it is not easy to attach a definite value to these figures. It is probable, however, that in a fair proportion of the cases the occurrence of this symptom is to be attributed to disorders of the nervous system directly due to the parental intoxication. The known influence of alcoholic parentage in the ætiology of epilepsy—to which we have referred above—would testify in this sense.

It is noteworthy that no less than ten out of the hundred women in our series lost one of their children by violent deaths—through overlying in drunkenness, scalding, burning, injuries in drunken brawls, &c. As an illustration of the character of the milieu created by alcoholic parentage this is sufficiently vivid.

Conclusions.—The observations which we have thus briefly analysed enable us to form a fairly clear idea of the mode in which maternal inebriety reacts upon the offspring.

We are familiar with the fact, clearly established by Morel,[11] that the chronic alcoholism of one or both parents frequently appears as the first moment in the degenerative career of a family; that it represents a state of artificial degradation of the organism, capable of transmission in augmented force to the descendants, and culminating in some four generations in the extinction of the stock.

In the case of maternal inebriety we have the same mode of action to consider, but with it, and very much more potent, we have the continued toxic influence exercised on the developing embryo throughout pregnancy. The brilliant researches of Féré[12] in the field of experimental teratology have sufficiently demonstrated the gravity of this influence.

We have, further, to bear in mind the possible effect of alcoholic excesses during lactation.

Lastly, reinforcing all these modes of influence, we have the detrimental effects, positive and negative, of the deterioration of the milieu as an indirect consequence of the mother's drunkenness.

Applying these considerations to the interpretation of the facts which we have noted, we may advance these propositions:

(1) Maternal inebriety is a condition peculiarly unfavourable to the vitality and to the normal development of the

offspring. Its gravity in this respect is considerably greater than that of paternal alcoholism.

(2) While its influence, particularly as measured by the test of infant mortality, appears to be exercised in considerable degree indirectly through deterioration of the milieu, a large part also depends on the primary action of the poison. The reality of this latter mode of influence is evidenced by the tendency to still-births and abortions, by the high rate of epilepsy in the surviving children, by the prevalent mode of death, by the effects of modifications of the intoxication.

(3) This primary influence of alcohol is due in part to the permanent effects of the poison on the maternal organism, inducing a transmissible degenerate condition ; in part to a direct toxic action on the embryo, owing to continued excesses during pregnancy and lactation.

(4) The first of these modes of primary influence is, by its nature, permanent, with a tendency to increase. The second mode, while tending also to a constant and constantly increasing operation, is susceptible of temporary augmentation or diminution.

(5) Under these combined modes of influence the normal tendency of the family with alcoholic maternity is towards a type the inverse of the syphilitic family ; that is to say, the firstborn children are normal, then come more or less defective children who live beyond infancy, then children dying in infancy, then still-births, and, finally, abortions.

(6) Deviations from this type are probably due in many cases to oscillations in the intensity of the second mode of influence. Deviations originating in this fashion may be seen, for instance, in the death in infancy of the earliest born children of the family as a result of conception in drunkenness, and in the survival of late born children when the mother has been imprisoned during part of the pregnancy.

It is hardly necessary to point out in conclusion the evidence which these observations furnish as to the social gravity of female inebriety, and the social profit in its removal. In suppressing the female drunkard the community not only eliminates an element always individually useless and constantly liable to become individually noxious ; it also prevents the procreation of children under the conditions most apt to render them subsequently, if they survive, a burden or a danger to society.

Notes of Illustrative Cases.—To illustrate the points referred to in the preceding paper, I append a short *résumé* of the notes of a number of our cases.

Obs. 1.—M—, æt. 42; drunkard since first confinement, twenty-four years ago; beer chiefly; suffers from cramps, cutaneous anæsthesia of extremities, night terrors; no D.T. Mother died of effects of fall while drunk, that being her usual condition; father relatively sober; sister drunkard; husband drunkard, son of a drunken mother. Ten children: first burned to death at eight years of age during mother's drunkenness; second, third, and fourth living, aged twenty-one, eighteen, and sixteen years, stated to be healthy; fourth, conceived in drunkenness, died of convulsions in the first year of life; sixth, seventh, and eighth died of convulsions in infancy; ninth and tenth dead-born, the latter five years ago.

Obs. 2.—D—, æt. 50; previous imprisonments, sixteen. Drinking since age of eleven; beer and spirits; has intercostal and ovarian pain, muscular cramps, dyspepsia; hallucinations of sight recently. Parents drank, but did not suffer from delirium; surviving brother and sister drunkards; sister has had five children, of whom four died in infancy; D—'s husband a drunkard, but not easily "alcoholisable." Four children: first born thirty years ago, scalded fatally during mother's drunkenness, three years old; second born five years later, died of convulsions at seven months (born in prison, where mother spent last five months of pregnancy); third and fourth died of convulsions at six months, the last twenty-one years ago.

Obs. 3.—D—, æt. 36; previous imprisonments, forty-four. Drunkard before marriage, chiefly whisky; suffers from muscular cramps, intercostal and ovarian pain, &c.; visual hallucinations latterly; has made two attempts to commit suicide, and has recently suffered from convulsions while drunk; parents drunken. Five children, the first four by a drunkard who suffered from D.T.; the fifth by another male, also drunken: first and third children dead-born; second and fourth died of convulsions under three months; fifth living and healthy, aged ten years (child born in prison, where mother spent entire pregnancy except first fortnight).

Obs. 4.—S—, æt. 36; previous imprisonments, thirty-seven. Drunkard since first confinement, twenty years ago; drinks anything; usual symptoms; has had two attacks of D.T.; father

relatively sober ; mother a chronic drunkard ; husband drunkard, suffers from hallucinations after drink, his parents sober. Four children : first living and healthy ; second and third died in infancy ; fourth living and healthy, aged sixteen (mother in prison for at least second and third months of this pregnancy).

Obs. 5.—S—, æt. 34 ; previous imprisonments, forty-one. Drunkard since first confinement ; beer and spirits ; suffers from cramps, gastric catarrh, ovarian pain ; one attack of D.T. ; attempted suicide twice ; convulsive hysteria for past year ; parents sober ; father died of bronchitis, mother of apoplexy ; husband drunkard, never delirious ; his parents sober. Six children : first, second, and third living and healthy ; fourth, aged six, of low intelligence, suffers from incontinence of urine ; fifth, aged four, epileptic idiot ; sixth dead-born : has recently had an abortion.

Obs. 6.—W—, æt. 30 ; previous imprisonments, 109. Drunkard before marriage ; chiefly spirits ; very violent after drink ; no D.T. ; one attempt at suicide ; father relatively sober ; mother notorious prison drunkard ; husband drunkard, has had D.T. Three children : first born nine years ago, died when a few days old ; second living and healthy, aged three (born in prison, where mother spent last two months of pregnancy, and also eight short sentences in early part of same pregnancy) ; third dead-born.

Obs. 7.—B—, æt. 37. Previous imprisonments, forty-four. Drinking before first pregnancy ; beer and spirits ; suffers from cramps in legs and hands ; ovarian and intercostal pains ; gastric catarrh ; no D.T. Father drank, died of heart disease ; mother sober, died in childbed ; two sisters, of whom one, sober and married to sober husband, has had eight children, all living and healthy ; the other, drunken, has had five children, three of which survived infancy ; also one brother, an epileptic idiot. Husband chronic alcoholic, drowned while drunk ; no D.T. ; his father also drank. Six children : first conceived in drunkenness before marriage, dead-born ; second living, aged eighteen ; third died of convulsions at six weeks ; fourth living, aged sixteen ; fifth died of convulsions at six weeks ; sixth dead-born.

Obs. 8.—R—, æt. 30. Previous imprisonments, thirty-four. Drinking since age of fifteen ; chiefly spirits ; suffers from cramps, anæsthesia of extremities, ovarian pain ; D.T. a year

ago ; four years ago severe head injury, since which R— suffers from attacks of *petit mal.* Parents living, drunken. Three children : first born thirteen years ago, conceived, probably in drunkenness, of a drunken male, died in convulsions at thirteen months ; second living, stated to be healthy, aged eight ; third living, aged six, is epileptic (father of these two children less alcoholic than father of first).

Obs. 9.—M'M—, æt. 60. Previous imprisonments, 167. Drunkard since first confinement ; chiefly beer ; suffers from cramps, tremor, intercostal neuralgia, gastric catarrh ; no D.T. Father drunkard ; knows nothing of mother ; husband drunkard. Seven children : first and second living and healthy ; third scalded to death at three years ; fourth, fifth, sixth, and seventh died of convulsions under one year.

Obs. 10.—S—, æt. 42. Previous imprisonments, twenty-three. Drunkard since first confinement ; beer and whisky. Suffers from gastric disorder, ovarian and intercostal pain ; no D.T. ; has recently made grave attempt (unconscious) to commit suicide. Parents sober ; sober sister has eight children, of whom six are living and healthy ; S—'s husband is sober. Five children : first living and healthy, aged twenty-two ; second died of measles at three years, third died of convulsions at seven months, fourth died of convulsions at six months, fifth dead-born.

Obs. 11.—C—, æt. 35. Previous imprisonments, eighteen. Drank before marriage ; beer and rum ; usual symptoms ; two attacks of D.T. Parents sober, other relatives sober ; husband drunken, has had D.T., his parents alcoholic. Four children, first living and healthy, aged eleven ; second, third, and fourth died of convulsions in infancy ; since birth of fourth has had two abortions.

Obs. 12.—G—, æt. 45. Previous imprisonments, twenty-three. Drank before marriage ; beer and spirits ; usual symptoms ; one attack of D.T. Father drunken, mother sober, brothers and sisters sober ; husband a chronic alcoholic, no D.T. ; his father also drunkard, hanged for murder. Five children : first living and healthy, aged twelve ; second died of bronchitis at three years ; third and fourth, twins, died at fourteen months ; fifth died of convulsions at eighteen months.

(1) *Compte-rendu de Bicêtre de l'Année* 1896.—(2) Quoted in Kurella, *Naturgeschichte des Verbrechers,* 1893.—(3) Jacquet, *L'Alcoolisme,* Paris, 1897.—(4)

During the year ending March, 1898, of 7240 females committed to Walton Gaol, 6212 had been in prison previously, and of these 2290 had served upwards of twenty terms of imprisonment (*Report of H.M. Commissioners of Prisons*). Recidivism in local prisons practically implies habitual inebriety.—(5) Magnan, *Leçons Cliniques sur les Mal. Mentales*, Paris, 1897.—(6) This nervous susceptibility which is manifested in sensibly equal degree by all levels—cerebral, bulbar, and spinal—of the nervous system is, of course, in itself no evidence of neuropathic constitution, as is, for instance, the special *cerebral* reaction of the degenerate (*vide* Magnan, *op. cit.*). As a matter of fact, amongst prison drunkards, those whose habit can be attributed to neuropathic disposition are not many.—(7) "Psychology of Criminals," in *Journ. Ment. Sci.*, 1871.—(8) Quoted by Lombroso.—(9) *Dégénérescence Sociale et Alcoolisme*, Paris, 1895.—(10) Quoted in *Grotjahn, der Alkoholismus*, Leipzig, 1898.—(11) Morel, *Les Dégénérescences*, 1857.—(12) Féré, *La Famille Névropathique*, 1894.

A Brief Note on Beri-beri in Asylums. By Conolly Norman, Richmond Asylum, Dublin.

Elsewhere I have dwelt on the occurrence of beri-beri in temperate climates(1) and on the clinical features of that affection as I have seen it.(2) At an early date I hope to be able to publish in detail the clinical records of a number of interesting cases. It is not my intention on the present occasion to dwell, save incidentally, on the symptomatology of the disease, nor to indulge in any speculations upon its origin or essential nature, for these latter points are, unfortunately, still in the region of speculation, and the light which I can throw upon them is scanty and indirect.

My object at present is not to attempt any elucidation of this affection, but merely to call the general attention of those who are engaged in asylum work to the special tendency which there would seem to be to the outbreak of beri-beri in asylums.

Until the last few years the appearance in Europe or in North America of beri-beri, which had not been immediately and directly imported, was a thing [save among the fishermen of the Newfoundland banks](3) unheard of and unthought of. Many people have probably not even yet realised that the researches of observers in Northern Japan and Saghalien have clearly demonstrated that to call beri-beri a tropical disease is a misnomer. Its prevalence in Brazil shows that it is not merely an Eastern disease; while its recrudescence

in that country, after a long period of quiescence, seems to indicate that it may be in that condition of extending energy which the history of other epidemics shows to occur from time to time without any reason hitherto understood.

Meanwhile, a fact remains which cannot be without interest to any of us, a fact which ought to be known to all asylum physicians, and which should arouse the vigilant attention of those who are responsible for the welfare of the insane in institutions—namely, that within the last five years epidemics of beri-beri have appeared in asylums for the insane in Ireland, England, North America, France, and, probably, Germany. Of these epidemics, the first broke out in the Richmond Asylum, Dublin, in the summer of 1894; another in the Suffolk County Asylum, Melton, Suffolk, in the winter of 1894; another in the Insane Asylum, Tuscaloosa, Alabama, U.S.A., in the spring of 1895; another at Little Rock State Asylum, Arkansas, U.S.A., in the autumn of 1895, and another at the Asylum of Sainte-Gemmes-sur-Loire, in the department of Maine et Loire, in the summer of 1897.

At the Richmond Asylum, Dublin, beri-beri is first known to have appeared in 1894. The exact period at which it began is uncertain, for I am satisfied that I overlooked many mild cases at first, and I misunderstood several of the earlier cases, which were severe enough. On the whole the oncome was extremely insidious. A few isolated cases occurred in the early summer, then there was a gradual increase, then a very great and sudden increase (September), then almost as quick a falling-off, and no fresh cases occurred after October. The average daily population of the asylum for that year was 1503. The number of cases of beri-beri registered was 127 men and 47 women, total 174. The registered deaths from this cause were 18 men and 7 women, total 25. It must be remembered that these figures are, undoubtedly, an under-estimate. In this year only patients were attacked. The disease was remarkably more prevalent among the epileptics than among the other patients. This was attributed at the time to certain local conditions, and these may have contributed; but we shall see presently that the same observation has been made elsewhere, and that there is reason to believe that epileptics are more liable to beri-beri than other inmates of asylums.

It is to be observed that in its relation to season, and in its

incidence among the sexes, this epidemic followed the ordinary habits of beri-beri.

No cases were observed during the year 1895.

Beri-beri reappeared in July, 1896. In this year the average population was 1686; 114 persons suffered from beri-beri, being 31 male and 76 female patients, and 7 (sane) nurses; 2 male and 6 female patients died. None of the nurses succumbed. The number of new cases decreased in prevalence towards winter, but fresh cases occurred up to and during January, 1897.

In 1897 (average population 1800) 246 cases occurred (including 4 beginning in January, after which there were no fresh cases till June). Of the total, 45 were male patients, 193 female patients, 2 male attendants, and 6 nurses; 3 male and 8 female patients died.

These epidemics differ remarkably from the first in attacking more women than men. The oncome also seemed less distinctly influenced by season.

During the year 1898, 12 cases occurred among women, and 4 women died of this affection. Some of these cases were fresh, some had suffered before. Mostly death occurred from slow decay, and apparently was due to fatty heart, consecutive to the more acute forms of the disease. Meanwhile, a number of cases in the female house linger on—some from 1898, some from 1897, some from 1896—cases which show a quick, irritable, and feeble heart, yet are pretty well when kept at rest, but soon show signs of œdema, feebleness of gait, and sensory troubles if they are allowed to get up.

No satisfactory cause has been assigned for the appearance of beri-beri in the Richmond Asylum. Extreme overcrowding had, of course, existed there for years, and the constant presence of dysentery points, as I have often insisted, to the existence of unfavourable hygienic conditions. Anything more definite than this has not yet been arrived at. In view of overcrowding, it is to be observed that as overcrowding was diminished the disease diminished; when overcrowding again became urgent the disease returned. The water supply is that of the city of Dublin generally. Provisions are procured either in the open market or from contractors who supply many other people besides the occupants of the asylum. Rice is little used, and there is no excess of farinaceous food. The dietary always

compared favourably with that of the other Irish asylums. Since 1894 it has been better than is usual in this country, and, indeed, bears comparison with the dietary of any public asylum in the United Kingdom.

In Suffolk Asylum the illness appears to have begun in its usual treacherous way towards the close of 1894. In January, 1895, definite paralytic troubles had appeared, and the disease spread rapidly. No fresh cases occurred after June. Only female patients were attacked; 71 cases occurred and 3 deaths. Through the kindness of Dr. Eager, who was then medical superintendent, I saw some of the sufferers in May, 1895. I formed the opinion that the affection was the same as that with which I had had to deal in Dublin the previous summer, but certain differences puzzled me. Chiefly I was struck by the lesser extent of the superficial œdema in the Suffolk cases compared to those occurring in Dublin. Also the character of the œdema was different. It was always demonstrable, but it was of a harder variety than I had seen in 1894, the condition somewhat resembling myxœdema. I now attribute no importance to this difference, because I have found the myxœdematoid form the prevailing one in my own later epidemics, and I have learned that this is a common observation in beri-beri.

In November, 1896, the ailment returned in the Suffolk Asylum. It seems to have appeared in the same insidious way as before. "It was noted that 10 of the women were gradually losing power and co-ordination in the lower extremities." It would seem that some 23 patients were attacked up to March, 1897. As on the previous occasion, the illness was confined to the female division. No cause has ever been ascertained for these outbreaks. A trace of lead was found in the drinking water, and although the disease had but a remote resemblance to lead-poisoning, effectual measures were taken to secure water free from lead. Nevertheless, the second epidemic occurred when the water was pure and had been pure for some time. The asylum had been overcrowded for a considerable period, and there had been other elements of bad hygiene. Dysentery of a severe form had been a constant source of trouble for many years.

The epidemic in Tuscaloosa Asylum, Alabama, developed in February, 1895, and 13 cases occurred during that year. The

disease recurred in the late summer of 1896, when 58 cases occurred. During the entire period of time covered by both epidemics the approximate number of patients in the asylum was 1200. Seventy-one suffered from beri-beri, 49 men and 22 women, and there were 21 deaths, 16 men and 5 women. The total number of epileptics in the asylum was 80, and of these no less than 32 contracted beri-beri. Dr. Bondurant, who gives an excellent clinical picture of the disease(4), draws attention to its variable mode of onset. "Some cases began suddenly with fever and gastro-intestinal irritation. . . . In other instances the onset was insidious, it being impossible to date the commencement of the attack. In still others the initial symptom was suddenly occurring dyspnœa, with tachycardia and violent pulsation of the vessels of the neck; œdema of the feet and ankles was in others the first indication." It was concluded that the outbreak was due to some form of malarial trouble.

There is little information available about the epidemic of beri-beri at the Arkansas State Asylum, Little Rock. It would appear to have occurred in the late summer and autumn of 1895. The cases numbered between 20 and 30. There was a great preponderance of men. Only one death occurred. The clinical symptoms described leave little doubt as to the nature of the disease. Intermittent malarial fever existed in the asylum at the same time, but here, as at Tuscaloosa, the diseases did not occur in the same individuals.

The epidemic at Sainte-Gemmes-sur-Loire is very interesting, and is as yet little known in this country. (I am glad to acknowledge my indebtedness to my distinguished friend, Dr. Manson, who was so kind as to draw my attention to the earliest published account of this epidemic.) It is, therefore, worth while dwelling upon it for a while. As in Dublin and in Tuscaloosa the oncome of the epidemic was insidious. In Dublin in the first outbreak, and in Tuscaloosa, the epileptics suffered most severely. Similarly in Sainte-Gemmes. The first thing there to attract attention was an unusual mortality among the epileptics, who died apparently in the status, and whose bodies were found to present a considerable degree of œdema. Attention having been drawn to this condition it was found that a number of other patients—epileptics, idiots, and melancholics—suffered from dropsy without presenting the usual causes of that symptom. The œdema had the peculiarity so often noticed

in beri-beri of being more solid than is usual in the ordinary forms of dropsy. In the great majority of cases œdema was the first morbid phenomenon which was noticeable. It appeared towards evening in the feet and malleolar and pretibial regions. Later on it was liable to spread, attacking the whole body and the serous cavities. Paralysis of the lower extremities appeared, the gait being somewhat similar to that of ataxy, but the feet tending to cling to the ground, the toes dropping and turning in, the inner edge of the foot slightly raised, and the dorsum arched (characteristic posture in neuritis). Paralysis sometimes extended to the superior extremities and also to the diaphragm, producing death by asphyxia. The paralyses were accompanied by extreme muscular atrophy and by remarkable sensory disturbances, tenderness of muscles, formication, cramps, cutaneous hyperæsthesia or anæsthesia. It is stated that the patellar reflexes were always abolished, but it is not quite clear whether that statement refers to cases only of marked paralysis. One third of the total number attacked were paralysed. Paralysis often appeared or increased with singular abruptness. Tachycardia was a prominent condition, the pulse running to 140 to 150, and at the same time becoming so weak as to be scarcely perceptible or imperceptible at the wrist. Sometimes the urine contained albumen. There was generally no fever, except such as was secondary to bedsores, &c., but in some rapid cases slight fever occurred at the onset, soon subsiding. Death was apt to occur under that distressing combination of symptoms which the Japanese call shiyoshin. Vomiting, which was a prominent condition in the beginning, and had usually subsided, reappeared; the pulse became quicker and more wretched; the respirations increased in frequency; the diaphragm became paralysed; mucus accumulated in the bronchi, and the patient was unable to cough or even to swallow. The agony was accompanied by profuse sweating. The picture is that of ordinary beri-beri, but there were certain special features in the epidemic at Sainte-Gemmes. Nausea and vomiting were very common at the commencement of the attack. They were more commonly accompanied by constipation than by diarrhœa. There was no anorexia, rather the reverse. Certain curious trophic changes occurred in the integuments. A considerable number of patients presented over the skin of the hands and face a peculiar brownish discoloration similar to that produced

by exposure to the sun's rays in field labourers. At the period of muscular atrophy patches of erythema, at first pink then red, appeared on the backs of the hands and wrists. On these patches bullæ appeared, which rapidly dried, leaving large adherent scales which again on desquamation left behind red and white marks like cicatrices. Purpura and ecchymoses were occasionally observed; there was a tendency to bedsores over the sacrum, and three patients suffered from painful effusion into the knee-joints. The cutaneous troubles called up strongly those of pellagra. This interesting circumstance led the recorders of this epidemic (MM. Chantemesse and Ramond, from whose paper in the *Annales de l'Institut Pasteur*(5) I have obtained the facts with reference thereto) to review the history of a singular epidemic which occurred at Saintes-Gemme-sur-Loire, 1855–65, and which has been chronicled by Billod (then director of the asylum) in the *Archives de Médecine.*(6) Billod believed the disease with which he was dealing to be, if not true pellagra, a special variety of that affection, which he proposed to call the pellagra of the insane. That opinion was not accepted generally at the time, nor has it since secured the concurrence of writers on pellagra. Elsewhere I have gone at some length into this question; suffice it here to say that I have read Billod's articles, and making allowance for the fact that peripheral neuritis was not understood at that time, and for the strong prepossession under which Billod wrote, there is a very remarkable similarity, as Chantemesse and Ramond point out, between the epidemic described by him in 1858 and that which occurred forty years later in the same institution.

The mortality in the epidemic at Sainte-Gemmes in 1897 was heavy. It is calculated that about 150 persons were attacked and that about 40 died. None of the staff suffered. Only the free patients (*indigents*) were attacked. "The disease raged as an epidemic in 1897, but it existed in the asylum before that date, for in 1896, and even in 1895, some patients were affected with indications of ascending paralysis quite similar to those which were observed during the epidemic of 1897" (C. and R.).

No satisfactory reason for its appearance has been suggested. It is noteworthy that it only attacked those patients whose dietary was the least nutritious. The possible recurrence after forty years is very remarkable. It is evident that the epidemic

of 1897 was insidious in its course, and unexpected. There is no account of the condition of the asylum as to accommodation. Sainte-Gemmes-sur-Loire is the public asylum for the department of Maine et Loire, and contained, when the statistical table attached to Dagonet's *Traité des Maladies Mentales* was compiled (1888), 790 patients. (It will be seen how large a proportion were attacked, even making allowance for a great increase in population since that date.) Billod, forty years ago, spoke of the situation of the buildings as rather damp, of the marshy ground in the neighbourhood, and of the occasional occurrence of intermittent fever. Probably these insalubrious conditions have been long rectified. We hear nothing of them now.

Cases are recorded of peripheral neuritis, not called beri-beri, but singularly like that affection, which occurred in 1897 at the asylum at Grafenberg, near Düsseldorf.(7) Similar cases seem to have occurred at Alt-Scherbitz.(7) In both places a malarial infection, connected with excavations for new buildings, was suggested as the cause. In countries where beri-beri prevails, as Pekelharing has shown, excavations seem to act by setting free a miasmatic poison. Excavations for buildings are so constantly going on about almost all asylums, that they may be said to constitute one of the ordinary conditions of asylum life.

I do not think it is reasonable to suppose that the records of so many outbreaks of a similar disease in asylums can be due to mere coincidence, or to any adventitious notoriety which the subject may have acquired. We must take it, I think, that the danger of infective peripheral neuritis (or beri-beri) appearing in an asylum is one of those things which we ought to be on the look-out for. In the last edition of Gowers' *Diseases of the Nervous System*, 1899, it is said: "The diagnosis can only be a matter of difficulty in a very early case, or in a patient who is not known to have been exposed to the infection, or in consequence of ignorance of the disease." It must be admitted that almost all practitioners in European countries suffered largely from ignorance of the disease until comparatively recent times, but it would seem from the above quotation that, even with knowledge of the affection, to know that any particular patient is likely to contract it is an element of importance in the diagnosis. It therefore becomes the more essential to remember its liability to occur in asylums.

A somewhat different opinion is expressed by another author, whose authority on this subject is so great that it cannot be disputed :

"To the medical man encountering it for the first time, and with only European experience and the ordinary text-books to guide him, case after case may present itself in the out-patient room or in the wards of a native hospital, and yet he may for a long time entertain no suspicion as to the real nature of the disease he is dealing with. Such diagnoses as muscular rheumatism, locomotor ataxia, progressive muscular atrophy, heart disease, Bright's disease, œdema from anæmia, suggest themselves, so varied and apparently unconnected are the elements of the picture. Such, as a matter of fact, are some of the diagnoses the novice in tropical medicine generally, on his first encountering beri-beri, arrives at and registers. By-and-by he is agreeably astonished to find that many of his presumed locomotor ataxia cases rapidly recover, his progressive muscular atrophy cases cease to progress, his Bright's disease cases show no albumen in a fairly dense urine, and his heart cases lose their bruits. On the other hand, he is painfully surprised at the number of sudden deaths occurring among patients who did not seem to be very ill; he cannot account for the frightful attacks of dyspnœa he frequently has to treat, for the anæsthetic patches in the atrophic cases, for the absence of ocular, bladder, and other characteristic symptoms in the apparently ataxic cases. After a time the idea of peripheral neuritis may occur to him, and then, perhaps, on a hint from some one with more experience, or from a book, or by a sort of happy inspiration, he one day concludes that the diseases he is dealing with are but phases of the many-sided complaint, beri-beri. Such I know to be the history of many a medical man's initiation to the diagnosis of this disease."—Manson, in Davidson's *Diseases of Warm Climates*.

Dr. Manson's own works have since contributed very largely to render the British practitioner more familiar with this most interesting disease. Those who are acquainted with the older literature of the subject will remember the old official opinion as to the connection of this affection with *Anchylostomum duodenale*, a superstition which was not quite extinct even in 1894.

But if we must suspend judgment as to the cause, either remote or immediate, of these asylum epidemics, lest we should fall into errors as absurd as our predecessors have made. Why do we venture to name this affection beri-beri? Because, as far as we know at present, the clinical symptoms and the post-mortem appearances are identical with those of beri-beri. The essential cause of beri-beri is unknown. We can, therefore, only apply the name to a certain congeries of symptoms and

signs and post-mortem appearances, and these appearances correspond in their great variety with the varying but corresponding phenomena of the asylum epidemics. The bacteriological results, not quite complete or satisfactory, go, on the whole, to support the identity of the various affections. It must be remembered that the symptoms of the disease vary somewhat in various localities and in different epidemics,(8) and that the kakké of Japan and the Brazilian disease were for a long while not recognised as identical with the beri-beri of Ceylon and China. It may be that at some future time it will be found that a number of diseases are grouped together under this one name of beri-beri. Many of us expect the same discovery in regard of a disease which we are all more familiar with—general paralysis; but just at present science will be better served by grouping together phenomena which have, at least, much in common, rather than by subdividing where we have no sufficient knowledge to guide us in classification, even though it should hereafter prove that further subdivision is justifiable.

(1) In a paper read at the Tropical Diseases Section of the British Medical Association at the Annual Meeting, 1898; see *Brit. Med. Journ.*, Sept. 24th, 1898. —(2) In a paper read at the Medical Section of the Royal Academy of Medicine in Ireland, Jan. 27th, 1899.—(3) See Putnam's article in *Journal of Nervous and Mental Diseases*, Aug., 1890. Dr. Osler informs me, on the authority of Dr. Birge, that such cases continue to occur among these fishermen.—(4) *New York Medical Journal*, Nov. 20th and 27th, 1897.—(5) *Annales de l'Institut Pasteur*, t. xii, No. 9 (Sept. 25th, 1898).—(6) *Archives générales de Médecine*, 1858, vols. i and ii.—(7) See paper and discussion in *Allgemeine Zeitschrift für Psychiatrie*, Bd. lv, H. 1. (8) The disease is probably both variable and periodic. Dr. Sinclair, Residency Surgeon at Selangor, has noted in his annual report for 1890 the variability which occurs in the Straits Settlements. He says, "The disease, happily, though still very prevalent, seems to have altered its character. In former years the history was an acute one; fever, anæmia, rapidly advancing paralysis and cardiac weakness, dropsy and death, or protracted paralysis in cases of recovery. Now it seems to be more chronic, perhaps endemic. Little or no anæmia with slight cardiac weakness, and subacute or chronic paralysis; death due less frequently to beri-beri itself than to intercurrent disease." Probably this change is analogous to that which distinguished the first from the later Dublin epidemics. As to periodicity some interesting observations made in the Dutch colonies in the Malayan Archipelago have been recorded by Kohlbrugge of Tosari, Java, in the *Therapeutische Monatshefte* (Bd. xxx, H. 1, January, 1899), from which it would appear that the prevalence of beri-beri amongst the European troops rose steadily from 1873 till 1884; and that there was then a sudden increase continuing till 1888, when the disease began to decline and decreased continuously till 1897. Treatment, prophylactic and other, seemed of little service, and disinfection valueless. The disease declined as unaccountably as it rose. Meanwhile Asiatics were more severely affected than Europeans, and the Asiatic curve, as it were, over-rode the European, beginning some years earlier, rising to a much greater height, and declining much more tardily. A similar periodicity, however, is evident in both.

Olfactory Hallucinations in the Insane. By F. St. John Bullen.

The olfactory organ in man appears in a rudimentary condition as compared with its highly developed state in certain macrosmatic animals. To comprehend the immense change that has taken place in the smell apparatus, together with the development of the higher brain, and which has attained its climax in man (of those animals still possessing a sense of smell), it is necessary to be acquainted with the anatomy of the limbic lobe in macrosmatic animals, and to follow the transitions occurring until the high mammal type of brain be reached. Moreover, in this process is to be found the only means of discerning in the human cerebrum the rudiments of an important organ and of allocating its present site of functional activity. The researches of Kölliker, and, still later, of Elliot Smith, have largely removed the confusion existing in respect to the true limbic lobe, and the definition of this and its constituent parts may now be safely attempted. The extensive and hardly yet completed work of the latter author, contained in a series of valuable contributions to the *Journal of Anatomy and Physiology*, and in the *Transactions of the Linnean Society, N.S.W.*, has been used by the present writer in giving the following sketch of the constitution of the limbic lobe and the cerebral commissures.

In marsupials the central cortex is fringed from temporal pole to olfactory peduncle by a typical hippocampal formation, which consists of a dorsal limb, and a ventral one or pyriform lobe. Occupying the hilum of this hippocampal arc and embedding its anterior extremities is a ganglionic mass, the pars intermedia ; these three parts form the true limbic lobe. In some macrosmatic animals with small pallium this lobe constitutes the main portion of the hemisphere. From the position which the hippocampal formation occupies in Reptilia and Amphibia it seems probable that the primitive and essential site of the hippocampus is on the mesial aspect of the hemisphere adjoining the olfactory lobe. In man the hippocampus forms the margin of the hemisphere only from temporal pole

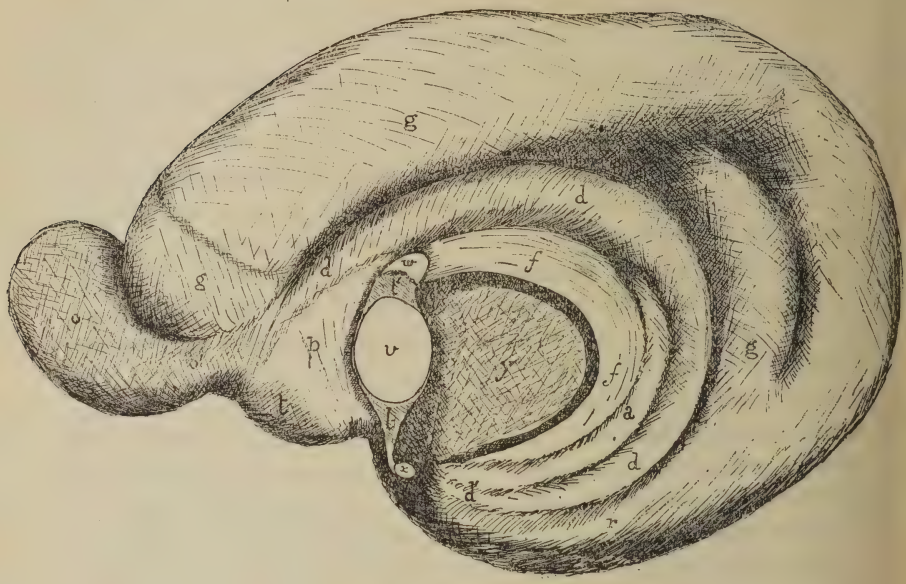


FIG. 1.

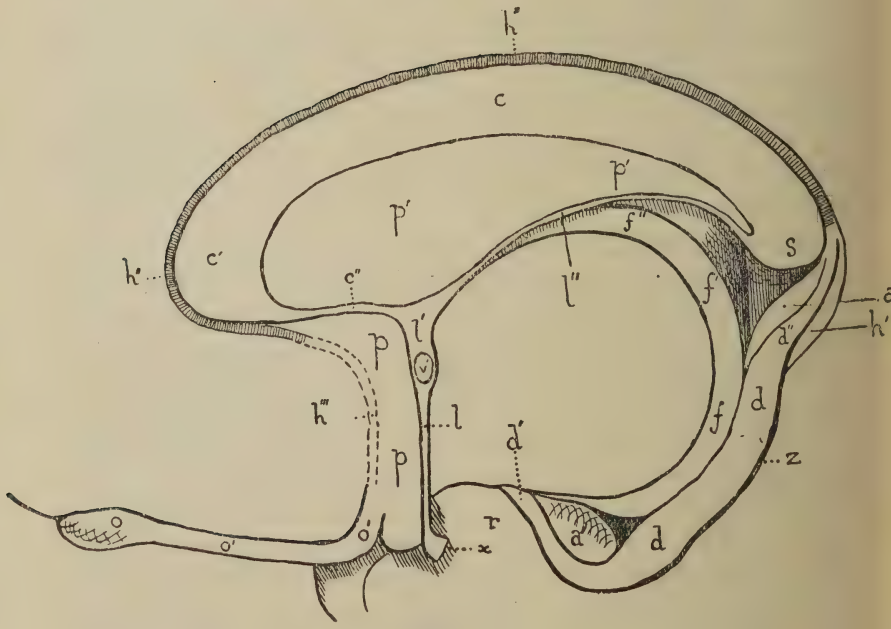


FIG. 2.

to inferior aspect of splenium corporis callosi. From this point to the lamina terminalis its place is taken by the fimbria. It must be noted that in Elliot Smith's opinion the true limbic lobe does not embrace the gyrus fornicatus nor the subiculum cornu Ammonis (the so-called gyrus hippocampi). The intermediate grey mass on each side consists of the pre-commissural body, lamina terminalis, and tuber olfactorium, which are represented in the human brain by the gyrus subcallosus (or peduncle of the corpus callosum, as it has been erroneously termed), the septum lucidum and anterior perforated space.

This grey region of the brain is, phylogenetically, the most ancient part of the cortex cerebri ; the hippocampal formation developing later in phylogeny, and the pyriform lobe even yet later. Corresponding to its early perfection of development, the hippocampal formation grows precociously in the human fœtus, and is fully developed at a time when the pallium is still extending.

The two hippocampal bodies, extending in marsupials from temporal pole to olfactory peduncle, have a system of commissural, association, and projection fibres called the fornix, this system comprising all the fibres which arise or end in the hippocampi and form constituents of the fimbria. The transverse strands of the fornix (*psalterium homo*) are derived from the dorsal and ventral limbs of the hippocampal arc, and the commissure, from accession of fresh fibres, assumes a curved shape, somewhat like that of the hippocampus. It thus possesses dorsal and ventral segments, each of which derives its main supply of fibres from the corresponding portions of the limbic arc. At this stage of development the interhemispheral connections of the pallium are made through the ventral commissure (*anterior homo*), which they reach by way of the external capsule. This commissure is therefore the homologue of the corpus callosum ; some strands from the pyriform lobe are collected in its formation.

Very little of any association system between hippocampus and pallium is found until the corpus callosum begins to form ; then strands from the corona radiata sweep through the alveus of the hippocampus, intermingling with the fibres proper to that region, and constituting the so-called false alveus. In consequence of this invasion by pallial commissural fibres of the dorsal limb of the hippocampal commissure,

it gradually disappears, whilst the pallium and its corpus callosum increase, till, with the full growth of these, the

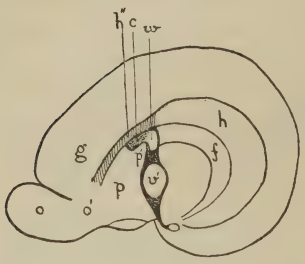


Fig. 3.

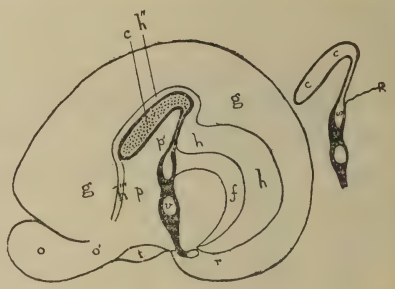


Fig. 4.

dorsal segment of the hippocampal formation is represented only in the striæ Lancisii, mediales and laterales, and gyri geniculi proceeding towards the olfactory lobe. The anterior and inferior portion of the limbic lobe, or pyriform body, does not undergo so marked a shrinkage as does the dorsal limb, and the atrophic process takes place mainly at the anterior pole, adjoining the olfactory bulb. Its vestigiæ are found in man represented in the outer part of the locus perforatus anticus and vallecula Sylvii, and in the lateral root of olfactory tract, which is in man the only obvious one. The pyriform lobe in human anatomy consists of the uncus, together with the extremity of the inverted hippocampus and fascia dentata (or band of Giacomini). Thus the uncus belongs to the true hippocampal region, or pyriform lobe, whilst the uncinate gyrus is a part of the pallium.

The ganglionic mass of the pars intermedia consists, as already stated, of pre-commissural bodies—lamina terminalis and tubera olfactoria. The lamina and bodies form one mass of grey matter, the latter occupying the interval between the dorsal and ventral limbs of the hippocampal arc, extending on each side of the median hemispheral fissure from the olfactory bulbs in front to the lamina terminalis behind. This last, which bridges the median fissure and joins posteriorly the pre-commissural bodies, was originally, in reptiles, a thin layer of grey substance, becoming thickened in mammals by ingrowth from the pre-commissural bodies, to form a mass which appears to fuse their hinder ends. In this enlarged lamina is embedded

the hippocampal commissure above, the ventral commissure beneath, whilst it is traversed by a number of uncrossed fibres of the fornix system. Hence it has been called by Elliot Smith the "commissure-bed." From the ventral to the optic chiasma extends its terminal prolongation, the lamina cinerea. Its upper extremity, superior to the dorsal commissure, remains in man as the indusium verum.

The anatomical boundaries of each pre-commissural body are as follows :—Above is the fascia dentata ; below and laterally, beneath the lateral ventricle, it becomes continuous with the special cortex of the head of the corpus striatum, which corresponds to the tuber olfactorium. Anteriorly it is connected with the peduncle of olfactory bulb ; mesially is the longitudinal fissure. This latter and free aspect of the body is called the pre-commissural area. The tuber olfactorium, corresponding to the special cortex above mentioned, receives olfactory radiations, and varies in size with the degree of macrosmatism ; it is, moreover, absent in anosmatic Cetacea. Out of the pre-commissural bodies the leaves of the septum pellucidum of man are formed in the following manner :—The dorsal commissure growing backwards and forwards stretches the matrix in which it lies, and which does not develop correspondingly, until the sheet of each pre-commissural body filling up the angle between dorsal and ventral limbs of the hippocampal commissure forms a leaf of the septum pellucidum. The callosal commissure, in its extension forwards, roofs in a part of the longitudinal fissure between the pre-commissural areas, and the space thus enclosed and bounded posteriorly by the ventral commissure is the cavum septi pellucidi.

The anterior portion of the pre-commissural body remains in the higher mammalian brain as the gyrus subcallosus of Zuckerkandl. From a supposed connection with the corpus callosum it has been called the peduncle of that body ; the real connection is, however, with the striæ Lancisii. The formation is as follows :—The callosal commissure, which is originally embedded in grey matrix, and even at its highest development retains a fine sheath of this, with the growth of pallium forwards, bends downwards and backwards at its anterior end, and its grey investment blends with the commissure bed still surrounding the ventral commissure. Thus a portion of the pre-commissural body is cut off from the rest of the grey mass, and this is the gyrus

subcallosus. The base of this remnant in man is to be found immediately in front of anterior commissure and lamina cinerea, forming a part of the locus perforatus anticus.

The pre-commissural body, which varies in size with the degree of macrosmatism, becomes encroached upon by the downward growth of pallium, and its anterior part is ultimately reduced to a ribbon-like band, or a mere filament as the internal olfactory root.

The longitudinal or uncrossed fibres of the fornix system have now to be described, as amongst them are certain strands, the function of which may be indicated as possibly olfactory.

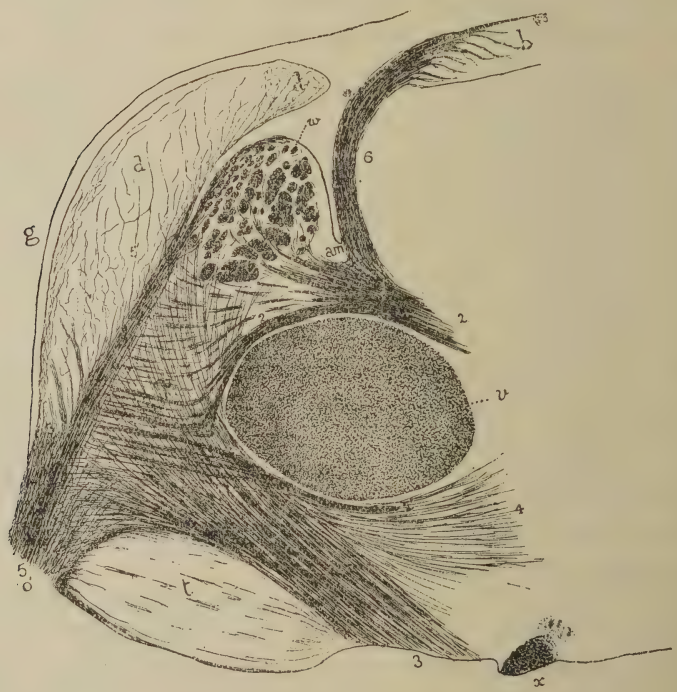


Fig. 5.

One series, the columna fornicis or post-commissural fasciculus, is derived from the fimbria of the undegenerate hippocampus, but receives a few fibres of the vestigial hippocampus, which perforate the corpus callosum, or curve round its anterior border. In animals, with or without a corpus callosum, the columna arches downwards and backwards in the septum pellucidum,

behind the ventral commissure, intermingling with fibres passing to ganglion habenulæ, and on reaching the corpus mammillare is carried on, by arborisation, to the anterior tubercle of the optic thalamus.

Another group of fibres called pre-commissural originates as the foregoing. The largest bundle of this group, termed by Elliot Smith the "hippocampo-basal," passes between all parts of the hippocampus and the basal ganglion of Ganser (Kölliker), which is a grey mass lying between the optic chiasma and cortex of tuber olfactorium. Another termination to this bundle is in the cortex of the tuber itself; and this tract, Elliot Smith considers, is probably of significance physiologically as a path for olfactory impulses to the hippocampus. Yet another and very important set of fornix fibres has been described by this author in ornithorhynchus (probably present in all monotremes and marsupials) under the name of fasciculus marginalis. This may be traced from the mesial surface of the olfactory peduncle into the molecular layer of fascia dentata, and finally to distant parts of the hippocampus. It lies along the line of junction of the fascia dentata and pre-commissural body, and will constitute a portion of the striæ Lancisii. In man, cat, and hedgehog, as other animals, fine medullated fibres are traceable from the striæ posteriorly into the molecular layer of the fascia dentata, and anteriorly through the gyrus subcallosus to the neighbourhood of olfactory peduncle. Elliot Smith, therefore, considers it justifiable to assume in these animals that a fasciculus marginalis exists, to which he ascribes the probable function of an olfactory path.

Some fibres arise in the multipolar cells of the gyrus subcallosus and septum pellucidum, and many of them can be traced to the neighbourhood of the nucleus amygdalæ, which is in man the homologue of the ventral part of the nucleus lenticularis.

It is in the highest degree probable, according to Elliot Smith, that the anatomical link between hippocampus and olfactory bulb will be found in the fibres of the pre-commissural body.

This author points out that "the aquatic mode of life accounts for the relative smallness of the olfactory bulb and pyriform lobe in ornithorhynchus, and the dominant influence of the sense of smell in a terrestrial, insect-eating mammal sufficiently explains the immense size of the olfactory bulb and

lobus pyriformis in Echidna (ant-eater)." The hippocampal lobe is relatively large in macrosmatic animals, but is yet well developed in anosmatic ones ; it is, moreover, associated with other parts by non-olfactory fibres, hence it can be only partly olfactory in function. Its highly specialised cortex, the fascia dentata, varies, however, almost directly with the degree of osmatism, and nearly completely disappears in anosmatic animals ; thus it may be assumed that the dentate fascia is almost wholly olfactory in function.

The preceding is a digest of Dr. Elliot Smith's work so far as it bears upon the olfactory region.

We can now summarise the most marked changes shown between the brains of some highly osmatic animals and the brain of lowly osmatic man.

The dorsal limb of limbic lobe is represented in man by the striæ Lancisii and gyri geniculi, continuous behind with the fascia dentata and hippocampus ventralis.

The pyriform lobe has, as its homologue, the uncus, the lateral root of olfactory bulb and the vallecula Sylvii where crossed by it.

The pre-commissural body, lamina terminalis or commissure bed, and tuber olfactorium, are replaced by gyrus subcallosus, septum pellucidum, locus perforatus anticus, and gyrus infracallosus. With these changes is associated the disappearance of the dorsal hippocampal commissure and its replacement by the interpallial or callosal commissure, and physiologically a great depreciation in the olfactory sense.

The remainder of the hippocampal lobe in man may represent other functions than that of smell, but such cortical representation as this sense has is most probably located in the uncus, this receiving the only important root of the olfactory bulb in man. Gudden's experiments showed the " gyrus uncinatus " to degenerate after removal of the olfactory lobe of the same side. The peripheral olfactory apparatus in man is rudimentary like its central representation.

The olfactory nerves are distributed over but a small area of the nasal mucous membrane ; the depth of pigmentation, which seems to bear some relation to the keenness of smell, is less marked than in more osmatic animals, and even than in certain coloured and savage races of man ; the olfactory mucous membrane is but one half or less the thickness of that of a macros-

matic animal, and the organ of Jacobson is atrophied, and its functions probably extinct.

Notwithstanding the subjection of this sense as a whole in civilised man, it is still capable of much cultivation in some individuals, and the superior intellectual equipment of man enables the remnant of the sense to be used with greater discrimination, appreciation of its associations, and refinements in its application than in the case of the lower animal possessing a keener olfactory perception, but one more limited in its relations. Instances are on record of the yet more remarkable educability of the smell function in those deprived of the other special senses. But the original purposes for which the sense is used in macrosmatic animals, namely, the arousal of sexual appetite, selection of food, pursuit of prey, and avoidance of enemies, no longer exist to any extent in man. Particularly is the relation between certain odorous emanations and sexual excitement marked in animals, whose fine perception of scent probably renders smell an organ the most effectual for distinguishing individuals of the opposite sex at a distance.

Some animals, notably the civet-cat, musk-deer, and beaver, during the rutting season secrete strongly odorous matter which has powerfully excitant effects. But although this particular association of smell is common in animals there is hardly credible evidence of such in civilised man ; indeed, the rudimentary cortical representation and associations of smell render it little likely that so vague an impression as that of an odour should be capable of arousing a passion so potent and yet controlled as the sexual. The suggestion has been offered that scents are plentifully used by prostitutes with the object of re-establishing this latent association ; this is very questionable.

Whether, however, a relationship of the kind above mentioned is latent, and is revealed under pathological conditions, must be considered later on. Normally, the really active agents in the production of sexual desire in man are the senses of sight and touch.

There is frequently observed amongst animals of the same sex, who are temporarily isolated from those of the opposite, a tendency to sexual relations with each other. Havelock Ellis points out that this does not indicate any inversion, but an accidental turning of sexual instinct into an abnormal channel, the instinct being called forth by an appropriate substitute or

diffused emotional excitement in absence of the normal object. When the sexes are again mixed normal conditions are restored, and the males cease from the frequent attempts to gratify any unregulated sexual excitement.

Some specific odour from the sexual organs probably serves as the especial determinant of normal sex selection in many animals in which the generative organ, from its exposure to view, may not exercise through the medium of vision any salacious influence. In civilised human beings clothing, by concealing those parts which are visually familiar between animals, may be largely responsible for an increased imagery in visual and tactile spheres, which, with arousal of the "nisus generationis," can completely supply the determinant effect of a directly exciting sense such as smell. On the other hand, it cannot be correct to assume any general connection between olfactory impressions and sexual excitement, since there are many animals besides man in whom the sense of smell is rudimentary, even to practical extinction.

Man uses smell but little for the selection of food; it does not enable him to distinguish instinctively the odours of substances prejudicial to him, only those which are offensive to him repel with certainty. According to Haycraft, qualitative as well as quantitative perceptions exist in smell, as with sight and hearing; that is to say, smell has properties bearing a relation to the arrangement and grouping of molecules, and not only to their vibratory activity; such a relation as form and colour present in the case of vision. The education of the olfactory function in man is probably in the direction of qualitative discrimination. The indefinite character of most odours and the absence of comparative standards, which are obtainable in the cases of vision and hearing, have resulted in a defective nomenclature wherewith to chronicle impressions of smell. From this obscurity it is usually found most difficult to express the nature or character of the impression, so that odours are generally described, perforce, as those of the substances producing them. This poverty of symbolism indicates a feeble and vague ideation. Dream images are with the greatest rarity of olfactory kind, and dreaming is not even influenced by the application of odorous stimuli, except in so far as symptoms of discomfort appear. According to Bevan Lewis, the senses of smell and taste, together with the still

more vague sensations of organic and visceral life, are the least discriminating and most subjective, have the least intellectual element, and are especially characterised by their slight ideal recoverability.

The relation between the senses of smell and taste is an intimate one, and their mutual excitability results in a frequent association. The sense of taste, although properly confined to the appreciation of sweet, bitter, acid, and alkaline reactions, is generally made to comprehend olfactory and tactile sensations. Aromas and flavours belong, however, to the province of smell. This common association between impressions of smell and taste renders isolation of the corresponding hallucinations often embarrassing. In the case of so vague an hallucination as that of smell, the difficulty of settling its relation, pre-existing or secondary to the delusion *en rapport* is considerable in even recent cases, and in those of old standing is often insuperable. The exclusion of purely illusory conditions is another perplexing task. The following considerations occur naturally to one in attempting it: the stability of the hallucination, the correct appreciation of ordinary tastes and odours, the transient nature of the supposed basis for illusion, and the permanence of the hallucination or the reverse, and the absence of any ascertainable basis for illusion. Each case has to be judged, however, on its merits, and it is well to hold in mind that peripheral excitations of a sense do not of necessity exclude an independent hallucination.

Hallucinations of smell exist much less frequently than those of touch, sight, and hearing, and they are possibly often overlooked, both when simple and associated with more prominent hallucinations. Research was made by Macario, in 1845, into their relative frequency. Of eighty-five patients having various hallucinations, the olfactory sense was found affected singly in three cases, combined with other hallucinations in eleven cases. Brierre de Boismont, somewhat later, examined several hundred cases of insanity for hallucinations of the senses. He groups, however, in some of his tables, illusions with hallucinations. In twenty-five cases of acute delirium having hallucinations two had the olfactory sense involved, but not singly. In 178 cases of mania with hallucinations and illusions the olfactory was not the implicated sense where only one was affected, but was found conjoined with other sense

perversions, hallucinations, or illusions in twenty-nine cases out of sixty-four. In ninety-five cases of melancholia, with hallucinations of but one sense, the olfactory was not affected. De Boismont considered the hallucinations of this sense rare, and even its illusions far from common.

Griesinger considered the occurrence of olfactory hallucinations infrequent, and generally allied to the early stages of insanity. Schlager, who investigated 600 cases of mental disease, found twenty-seven apparent instances of the hallucination, but of these he was only able to decide upon five as certainly not illusory. Dr. Savage has stated that he finds smell hallucinations more common than is generally supposed. Krafft-Ebing believes them rare where a sexual element is wanting in the case. Dr. Urquhart has furnished me with particulars of hallucinations of smell in about 300 admissions into James Murray's Royal Asylum. They were met with in thirteen cases. This adds further evidence as to their relative infrequency. The close association between the senses of smell and taste, and the visceral and organic sensations, has received allusion ; hence one might expect, in cases where the latter are brought into prominence by hyper-activity or disruption, to find the former two involved early in the widening disturbance in sensory spheres. The hallucinatory and illusory states arising in connection with a perverted activity of the reproductive system, or with the lapse in the sum of organic sensations effected by the climacteric, may accordingly be regarded as likely to be associated more particularly with disturbances of the senses the nearest in kin. Many writers seem to find a revelation of man's latent animalism in the supposed connection between smell hallucinations and sexual derangements, and fairly numerous cases are recorded illustrative, it is supposed, of this mutual relationship. Attempts have been made to show in man an intimate physiological association between nasal and reproductive apparatus, even to the mapping out of uterine areas in the nose! It would be premature to entertain these theories seriously with the evidence yet existing. Amongst authorities who hold to the connection between olfactory impressions and sexual excitation are Krafft-Ebing and G. W. Savage. The former believes it to be clearly defined, and states that in the psychoses of both sexes dependent upon masturbation, as well as in insanity due to disorder of the sexual organs

of the female, or during the climacteric, olfactory hallucinations are frequent, whilst in cases where a sexual cause is wanting they are infrequent. Dr. Savage holds somewhat similar views. He thinks that hallucinations of smell, besides being generally more frequent than is accepted, are often encountered in climacteric insanity and with disorders of the reproductive organs. He investigated fifty-four cases of insanity at the menopause, and of those having hallucinations 20 per cent. were of olfactory sense, 25 per cent. tactile, and 38 per cent. gustatory.

Drs. Goodall and Craig, in a paper on climacteric insanity (*Journal of Mental Science*, April, 1894), give statistics as to the occurrence of hallucinations of smell in this condition. Of seventy-one cases with hallucinations (Bethlem) 26·7 per cent. were olfactory; of eighty-one cases at Wakefield 11·1 per cent. They quote Matusch, who considers smell hallucinations as rare at the climacteric, but when present connected with uterine trouble and sexual craving; he also finds them more common in young women, and this statement the authors of the paper interpret as indicating an association between smell hallucination and healthy florid ovaries rather than atrophic organs.

Schlager has denied any necessary connection between smell hallucinations and coincident sexual excitement; he considers this as a chance occurrence, or one dependent on general nervous excitement.

Whether these hallucinations be viewed as indicative of the revival of a long-submerged association during the evolution of sexual instinct, or of the tumult in the centres of organic sensation attending the rapid involution of the reproductive system, their influence on prognosis must be regarded as grave. Bevan Lewis considers them of ominous import, and as frequently associated with irreparable alcoholic brain disease, epileptic states, and traumatic forms of insanity. I cannot find that this author makes mention of them as especially associated with evolutional or involutional forms of insanity. Apart from insanity, olfactory hallucinations have been observed in epilepsy; they constitute the rarest form of aura met with in this disorder. Dr. Hughes Bennett examined into 500 consecutive cases of epilepsy, and found olfactory auræ in but four. Pierce Clark discovered only one case amongst 241 epileptics admitted to Craig Colony. The researches of Gowers, Sömmer, and others show the rarity of this particular hallucination. Dr. Hughlings

Jackson has recorded a few cases of *petit mal* with an aura of foul odour. He has dealt with a group of epileptics under the title of "uncinate," embracing crude sensations of smell and taste, lip-smacking, and dreamy, slightly asphyxial state. Some of these cases had an epigastric aura. Different varieties of this group, Dr. Jackson supposes, are dependent upon discharge lesions of different parts of the uncinate gyrus, or of convolutions in its close neighbourhood. It is suggested that in this cortical region are the physical bases of some systemic sensations, especially those of the digestive system. McLane Hamilton, Anderson, and C. K. Mills have also recorded cases of epilepsy with olfactory auræ.

It has already been mentioned that the probable locality of olfactory function in man is the uncus. The results of various experiments upon living animals have been described, but in many the sites of lesion are not well limited. Ferrier has found stimulation of the tip of the temporo-sphenoidal lobe to produce sniffing movements; Munk observed in a dog, whose sense of smell seemed to have disappeared, both hippocampal gyri converted into cysts; Luciani has noted that extensive decortication of the gyrus hippocampi and partial ablation of the cornu Ammonis resulted at first in almost complete anosmia. Autopsies in cases of anosmia and olfactory hallucinations have disclosed softenings, recent or old, or growths involving the tip of the temporo-sphenoidal lobe, nucleus amygdalæ, uncus, or some of the preceding parts with involvement of the olfactory tracts; whilst Luys has reported four cases of hallucination due to lesion in the optic thalamus; Féré, one due to softening in posterior part of internal capsule. Olfactory hallucinations have been met with in cases of tabes dorsalis, in hysteria and neurasthenia, traumatic neuroses, &c.

Tilley and W. S. Colman have reported cases amongst the sane, and the present writer has notes of some well-marked instances. Dr. Head has found hallucinations of smell associated with "visceral states in the sane" with considerable frequency. He says, "These hallucinations differ from smells depending on an objective cause in that they are almost always associated with nausea, and occasionally followed by vomiting."

Almost the only record of smell hallucinations of pleasant kind which the writer has come across is one by Svikozski of a psychopathic epidemic amongst Russian patients. These pre-

sented symptoms of elation of spirits, belief in their leader as Christ; 80 per cent. had sensory illusions, and most of them had hallucinations of smell, perceiving extremely agreeable odours. Brierre de Boismont alludes to such pleasurable hallucinations as being rare, and connected with ecstatic religious states.

I have examined into ninety-five cases of patients in whom olfactory hallucinations were presumed to be present; this number was collected from asylums containing in the aggregate some thousands of inmates, but for obvious reasons no attempt can be made by me to estimate any proportion these cases may bear to insane persons as a whole. In several instances it is impossible to decide whether the complaint of smell is in nature illusory or hallucinatory. There are many cases in which one can assume a basis of illusion, but in some this is transient whilst the complaint of smell remains permanent, in others there is constant basis for illusion, but only occasional complaint of smell; sometimes the smell and taste hallucinations coincide, at others they are isolated, whilst one has also to bear in mind the great number of cases in which, although there is plenteous ground for illusion of smell, no odour is acknowledged. It must be admitted, however, that the class of cases amongst which hallucinations (or illusions) of smell seem mostly found are of the type most favourable for the discovery, if not manufacture, of false perceptions. In other words, in the chronic delusional forms of psychosis there is the constant tendency to weave fresh evidence of persecution, and it is precisely from this tendency that the extreme difficulty arises of distinguishing real hallucinations, especially of olfactory kind, from the voluntary "projections" of the patient. I do not think that many instances of purely illusory kind are included in these ninety-five cases. In nine there are certainly good grounds for believing the condition peripherally excited, in several others it is uncertain, but the great number I believe to be genuine hallucinations. By reason, however, of the difficulties just mentioned, and from those encountered in the observation of many of the cases, I prefer not to attempt any strict limitation of cases to those of pure hallucinatory kind.

Almost of necessity from the method of collection of these cases, the occasionally short time available for examination, and the impracticability of obtaining all needful details, I claim only

to show some general features of olfactory hallucinations which may or may not present anything new or interesting. No asylum except one in which thorough investigation of such rare hallucinations as these has proceeded systematically for years (and where there is a free change of inmates) can afford really valuable material. Olfactory hallucinations occur almost always in association with those of other senses. In three cases only out of the ninety-five do they appear singly. They are conjoined most often to auditory hallucinations, next often to gustatory, then tactile, and least frequently to visual. Their character is nearly invariably unpleasant; "foul, filthy, putrefying, deathly, or corpse-like," are general descriptions given in the majority of instances; seldom any more definite characterisation is attempted. Less often, smells of burning sulphur, gas, blood, poison, are complained of. The nomenclature seems to have far more relation to the prominent delusion than to any specific character in the hallucination. Four cases described the odours as pleasant, but in two of these there were alternations with unpleasant smells. Generally the smell is said to come in puffs or gusts, occasionally to be diffusive or general. Nearly all patients regard the odour as coming from their surroundings, in only six cases does it seem to emanate from themselves; in a like number both self and surroundings were accused. It is seldom that any variation in the nature of the odour is described; usually associated with confirmed delusion, its interpretation is, when decided upon, retained. Like other hallucinations, that of smell appears especially frequent and troublesome at night. I have not attempted to test the relative degree of anosmia, for which graduated solutions are necessary, but have in over half of the cases attempted to satisfy myself that no serious loss or perversion of smell function was present, using for this purpose familiar odoriferous substances, such as camphor, peppermint, lavender water, turpentine, cloves. In but very few is found anything more than imperfect recognition of the odour or its title, and this is hardly surprising when the probable lapse of time since a previous experience of the particular smell is considered. The recurrence of the hallucination varies much. In nearly a fifth of the cases the smell is said to be almost or quite constant, in the rest intermittent to the extent of occurring once in two or three days up to several times each day and night.

There is no interest in recounting the different delusions which arise from, or have given colour to, the hallucination. They depend upon the supposed source or vehicle of the smell, or on other existing delusions and hallucinations. No marked history of alcohol is found; in seven cases it is certain, but probably this is an under-estimate. Syphilis existed in three. Heredity is frequent.

It will be seen that olfactory hallucinations are of bad omen from the class of mental disorder in which they are mostly found. They are evidently intimations of grave fundamental disturbance of mind; only seven of the cases recovered, or are considered recoverable. Amongst the climacteric cases they are found mainly in the chronic residue. The greater proportion of the patients are females—sixty-four. Of this number, sixteen were climacteric, and thirty-three of chronic delusional type. Of the thirty-one male patients, twenty-two were of the latter class; the remainder, in both sexes, consisted of mania, chronic mania, senile melancholia, and chronic alcoholic mania. In but three of the climacteric cases were sexual hallucinations or delusions present. Fourteen other women had sexual delusions, and these were nearly all instances of chronic delusional insanity. Taking male and female patients together, ninety-five in number, no less than thirty-one had sexual delusions. This large proportion may be viewed as indicating the association advocated by Krafft-Ebing, Savage, and others, or as denoting that in certain forms of insanity both sexual and olfactory functions are especially but independently in evidence. I have not had, in the collection of the present cases, the needful opportunity for observation of recent and acute insanities, nor have I sufficient experience of neurotic females with disorder or disease of their sexual organs to be able to allude to olfactory hallucinations in association therewith; my patients have been found almost entirely amongst the chronic inmates. But from the recollection of careful examination pursued in many hundreds of cases I have the impression that amongst pauper patients olfactory hallucinations in recent cases were rarely observable. This we may assume, that the more general the sensory implication, the more fundamental the disorganisation of mind, the more will the remoter sensations be brought into prominence. Especially with the great rise of subject-consciousness occurring in chronic delusional forms are we to expect

projection of every aroused sensation in the condition of hallucination. In the introspective analytical efforts of chronic persecutory insanity the sexual feelings will often receive notice, and no less even so deep-seated a sense as the olfactory. All the cases in which sexual delusions appeared being grouped together, the sensory disturbance is seen to be diffused. Thus, in seventeen women, a total of forty hallucinations is found apart from the olfactory. In fourteen men thirty-seven hallucinations, still excluding the olfactory. After calculating the average number of hallucinations associated with those of smell in these last cases, and comparing it with the total average, I find the percentage to be notably higher in the sexual cases. Thus it would appear that both sexual and olfactory delusions are connected with psychoses, the most wide-spread and fundamental in nature. In an attempt to observe some more direct relationship between sexual perversion and olfactory impressions I examined fifteen cases of insane and confirmed masturbators, not including any instance of chronic delusional insanity. I did not find evidence or admission of hallucinations of smell amongst these.

Thus, from the material collected by me, I am by no means inclined to support the view that there exists any direct connection between the reproductive system and the sense of smell; an apparent association is, it is true, provided by their frequent joint occurrence in fundamental disturbances of the mind. A relationship due to former intimate co-operation in animal life can have, at any rate, far from invariable influence; for we all, on the one hand, must recognise the number of cases with prominent and morbid sexuality in whom no olfactory hallucinations have existed, and on the other, cases of smell hallucinations in which no anomaly of the sexual life appears.

Dr. Urquhart has very kindly sent me particulars of thirteen cases having olfactory hallucinations. As they do not possess all the necessary details I have not incorporated them in my tables, but I quote them separately, as they have certain features of considerable interest. Six were males, seven females. Heredity was ascertained in eight cases, neurotic history in three, two were climacteric, masturbatic habits were present in eight cases. The mental disorder in five patients was chronic persecutory insanity, in two delusional insanity, in the remainder chronic mania and melancholia, relapsing mania and dementia.

One, perhaps two, of these only had a chance, and that doubtful, of permanent recovery. Other points of interest were—one climacteric case with masturbatic habits, constantly complained of nasal irritation ; a case of dementia picked at her nose whilst masturbating, a third case of chronic mania and masturbation picked at her nose when excited. One patient was alcoholic, another syphilitic. Other hallucinations are not mentioned. I have not had the opportunity of observing any number of cases of general paralysis in a sufficiently early stage to obtain evidence of olfactory hallucinations. Dr. Mickle has found them present in 20 per cent. of those patients having hallucinations ; he, however, includes illusions in this number.

All observers are agreed that olfactory hallucinations are very seldom met with, and particularly rarely occur singly. The diversity of opinion is rather concerned with the especial circumstances under which they are encountered. There seems no difficulty in advancing reasons for the relative scarcity of the hallucination. Smell, as has been indicated, takes but little part in the *rôle* played by the senses ; in civilised man its impressions are both few and little varied, are exceedingly difficult of recall, have few æsthetic associations. Aroused, too, as the function is mainly in connection with taste, its sensitiveness is very generally dulled by coarse and pungent foods and liquors. From these and some other considerations the sense receives but little intellectual recognition. (It seems possible that the rapid education of the sense and its associations, not usually cultivated, may account for the exhausting and early deleterious effects noted in tea-tasters.) Smell has, in short, practically no office to hold in the relation of civilised man to man, and one but slight and vague in that of man to his surroundings. Considering, then, how subordinate in both structure and function this potentially important sense has become in civilised beings, it can be but tardily implicated in the dissolution processes of insanity. Consequently its hallucination can only be looked for when some close and oft-excited association is aroused, such as that of taste, or when some general implication of the senses, of a fundamental kind, exists. Much evidence must be required to show that an hallucination of the olfactory sense when occurring singly is directly related to a morbid condition of the reproductive system ; but when a connection is affirmed in the presence of several hallucinations,

i. e. of a general sensory disturbance, there must be a danger of overlooking other factors in the case. It is not possible, however, to write except as to the possibilities in this subject, for the authors who have laid stress upon an olfactory-sexual nexus may have had the very instances in support of their views that the present writer has failed to secure. Such an association would show much more distinctly when met with in early cases of insanity and amongst the more educated class, whose sensations are better observed, and in whom the function of smell has been enlarged by more varied and numerous experiences than have fallen to the lot of the pauper inmates of asylums.

I must here express my indebtedness to various gentlemen who have placed both patients and case records at my disposal. The majority of cases have been taken from the Bristol City Asylum, the London County Asylums at Banstead and Hanwell, St. Luke's Hospital, and Barnwood House. By the courtesy of Dr. Elliot Smith I have been able to reproduce some of his illustrations.

[Since this article went to press, Dr. Conolly Norman has very kindly sent me an interesting communication on the subject of olfactory hallucinations, a brief abstract of which I here append. Dr. Norman regards these hallucinations as very infrequent under any circumstances, and especially rarely met with singly; as generally associated with gustatory hallucinations, but also found co-existent with those of all or any of the senses. They are always, however, less marked than either auditory or tactile hallucinations. The greater number are described as disagreeable, gusty, and due to external agency. He believes in a distinct and frequent association between olfactory hallucinations and sexual disturbance, *i. e.* masturbation, sexual excess, climacteric, &c.; in the case of the first two the patient being apt to conceive the smell as proceeding from himself. Delusions connected with the reproductive organs are frequently associated with olfactory hallucinations. Both are commoner in the female sex.]

Illustrations.

1.—Mesial surface of the cerebral hemisphere of *Phascolarctos.*
2.—Scheme of cerebral commissures and margin of cortex of human brain.

3.—Scheme showing the relation of a primitive type of corpus callosum to the hippocampus. The degenerated part of hippocampal arch is shaded (*h''*).

4.—Scheme to indicate the growth of the corpus callosum, and the indentation of the hippocampal arc and stretching of the precommissural body produced by this.

5.—Sagittal section of the commissural and precommissural regions of the hemisphere of *Ornithorhynchus*. 2. Columna fornicis. 2'. To columna fornicis. 3. Hippocampal basal bundle. 4. Subthalamic. 5. Fasc. marginalis. 6. Stria. med. thalami.

Explanation of Reference Letters.

a, *a'*, *a''*. Extra-ventricular alveus. *b*. Ganglion habenulæ. *c*. Corpus callosum. *d*, *d'*, *d''*. Fascia dentata. *f*, *f'*, *f''*. Fimbria. *g*. Pallium. *h*, *h'*, *h''*, *h'''*. Hippocampus. *l*, *l'*, *l''*. Lamina terminalis. *o*, *o'*. Olfactory bulb and peduncle. *p*. Corpus precommissurale, gyrus subcallosus. *p'*. Septum pellucidum. *r*. Pyriform lobe. *s*. Splenium. *t*. Tuberculum olfactorium. *v*. Ventral commissure. *w*, *w'*. Hippocampal commissure. *x*. Optic chiasma. *z*. Hippocampal fissure.

Discussion.

At Spring Meeting, S.W. Division, 1899.

The Chairman remarked that they were much indebted to Dr. Bullen for his very thorough and scientific paper. It had evidently cost him a great deal of labour, and was one they could more readily appreciate in print. As far as his own experience went in regard to olfactory hallucinations, they were not very common. Very frequently the complaints as to the quality of food supplied probably had their origin in hallucinations of smell. He had a patient many years ago who was constantly complaining of his food, and used to hide it away till such time as the magistrates or commissioners arrived, and till it really did smell. In this case, however, the patient did not complain of a mere putrefactive smell, but attached some peculiar kind of smell to the food supplied.

Dr. Macdonald said when Dr. Bullen wrote to him asking for cases, curiously enough he was able to write respecting one very interesting case, interesting not only because of the hallucination of smell during life, but from the condition found at the post-mortem. It was the case of an old woman—one of the chronic cases which was alluded to,—and she had in her younger life suffered from an injury to the head. How it happened she was never quite able to tell them. There was a depression about the size of the point of the thumb on the forehead, and at the post-mortem they found pressing on the olfactory bulb an exostosis which looked as if a piece had become detached when the cranial injury happened. There was also a man under their care at the present time who every now and again refused to take any dinner. He was in very good health, quite stout, and apparently did not suffer much. When pressed as to why he did not eat his dinner, he would say, "It's poxed." When they pressed him further he, with oaths, held it up before them, saying, "Can't you smell?" He could not speak personally of any other cases which had come under his observation where there were instances of olfactory perversion with the other special senses intact. The really interesting cases were those of olfactory perversion without any of the other special senses being affected. When they found this hallucination mixed up with others it was a very difficult matter to draw a line. He wished on his own behalf to thank Dr. Bullen very heartily for his able contribution to their proceedings.

Dr. Benham said he was in general agreement with what Dr. Bullen had said, and he thought the remarks Dr. Macdonald had addressed to them were especially interesting. For his own part he might say that at present he believed they had no case in his asylum in which hallucinations of smell existed apart from other ones, and from his own experience he believed them to be very rare. The two cases Dr. Macdonald had named were therefore interesting. They were very thankful to Dr. Bullen for working on this subject, and hoped they would have an opportunity of reading his remarks *in extenso* in the Journal.

The Brabazon Scheme in an Asylum; History of its Introduction, and Record of a Year's Working. By HAMILTON C. MARR, M.D., Sen. Ass. Med. Off., Woodilee Asylum, Lenzie, Glasgow.

IN 1880 Lady Brabazon, now the Countess of Meath, offered a grant of money for materials to any workhouse or infirmary that would try her scheme. The scheme consists in teaching infirm and crippled inmates of workhouses to employ their idle hands usefully, and in this way "beguile many a weary hour, and add zest to their lives." Carlyle's picturesque tourist well describes the condition of many a workhouse inmate: "They sat there near by one another, but in a kind of torpor, especially in a silence, which was very striking. In silence! for what word was to be said—an earth all lying round, crying, 'Come and till me,' 'Come and reap me?' Yet we sit here enchanted, we know not why. In the eyes and brows of many of these men hung the gloomiest expression—not of anger, but of grief and shame, and manifold inarticulate distress and weariness."

In 1883 one workhouse infirmary accepted the scheme, and now it is in operation in over 156 kindred institutions.

In 1895 the Brabazon scheme was introduced into Scotland at Barnhill Poorhouse, permission having been given by the Barony Parish Council to a committee of ladies to teach the infirm patients. Miss Allan of Glasgow paid the outlay for materials for the first year.

From its inception the work at Barnhill was a marked success.

Its applicability to the patients at Woodilee was first mooted in 1897, and in January of 1898 it was introduced into the asylum.

The main considerations that weighed with the medical staff of the asylum in giving support to the Brabazon Society were these: In every asylum many of the male patients, quite unfitted through physical weakness for outdoor labour, had never their whole time occupied by the light indoor occupations; and with women patients it has ever been a vexed question with asylum authorities how to occupy them suitably

and satisfactorily. Purely mechanical work—such as plain sewing and knitting—was manifestly unsuited to relieve their minds of morbid thought. Again, many patients of both sexes, owing to their mental condition, had no work available, save such as would be given to them under patient self-denying supervision—conditions not obtaining under ordinary asylum circumstances, and many paralytic and bedridden patients were obviously much neglected in this respect. It was felt that the varied occupations of the Brabazon Society would meet the wants of all such cases.

The Brabazon Scheme in operation at Woodilee is managed by twelve ladies—chiefly from Lenzie. They have a secretary who acts as medium between the officials of the asylum and the committee of ladies.

As each of the ladies of the Brabazon committee is peculiarly gifted to teach some special subject, it can readily be seen that the work engaged in is both varied and interesting. There is a weekly meeting on Fridays from 10 a.m. till 12 noon, and the patients of both sexes are collected into a large sitting-room. Often the ladies bring with them musical friends, who sing, play the violin, piano, &c., so that the work proceeds under the happiest auspices.

In the variety of occupations taught room is found for the most mindless. One idiot paints cards and match-boxes and other knickknacks (of course from copies, but with astonishing fidelity and zeal). Other patients work at fancy knitting and embroidery; others at Smyrna rugs; while some are busily employed making up multicoloured papers into flowers, lamp-shades, and other ornaments. Macramé and drawn linen-work are also engaged in. Each individual's aptitude is tested, and the work assigned is that best fitted for each.

Recently wood-carving, basket-making, and bent iron-work have been added to the list of occupations. The number of patients at present employed in the scheme is fifty, and this number is increasing every week. Friday—the Brabazon day, as it is called—is invariably looked forward to, in this asylum, by the patients. The only day of the week for some, and the only days in the year for others, when a breath from the outside world is felt, and when sympathetic, kindly, and helpful words, at least, are sure to be spoken.

The medical staff are convinced that not only has the work

a brightening influence on the patients,—it is actually of benefit to their mental condition.

The purely utilitarian results of the Brabazon Society's work were evidenced at a sale of work opened by Her Grace the Duchess of Montrose in November last, when the ladies were enabled to pay off the original sum given by the asylum committee for materials to carry on the work ; and, in addition, gave to each patient connected with the work a small gift as a remembrance of his share in the scheme, and to all the patients in the asylum a delightful entertainment of an evening.

It may be well to mention one point in connection with the working of the Brabazon Society in an asylum—the practical interest of the ladies in the patients ; and their knowledge of asylum life gleaned from their weekly visits is bound to have an influence on the outside world as to what an asylum really is, and hasten the time when the only conception of an asylum will be that of an hospital for the treatment of disease of the brain, where the patients receive all that modern science can command and humane thought suggest.

The requirements for a Brabazon Scheme in any asylum are the formation of a committee of ladies having leisure and thought to devote to the work ; the appointment by this committee of a secretary, whose duties would be to record the work done by the Society—who would be a means of communication between the committee and the asylum officials as to the nature and number of patients who could take part in the scheme, and transact any other business requiring the co-operation of asylum authorities and Brabazon ladies.

In this way a Brabazon Society at work in an asylum can be a power only for good.

Are Punitive Measures Justifiable in Asylums? By Thomas Drapes, M.B., T.C.D., Medical Superintendent of the Enniscorthy District Asylum.

The subject of this paper is but a small part of a very much greater question—the responsibility of the insane. The query embodied in its title is one which, at the present day, it

would seem necessary to propound with bated breath. To the minds of many very eminent persons, no doubt, the very fact of such a question being raised at all would indicate a want of sanity on the part of the querist who was rash enough to propose it for discussion. And yet the diversity of view, which is only too evident when the subject of the "responsibility of the insane" is brought before any assembly of alienists, shows that opinion on this matter is still very unsettled, and we seem to be as far from finality as ever. In proof of this I need only refer to the discussion on Dr. Reginald Nootts paper at the general meeting of the Association in London in October last, reported in the January number of the *Journal of Mental Science.*

Two things are manifest from this discussion:

(1) There is a want of agreement as to whether there is such a condition as "partial insanity."

(2) There is a want of agreement as to what constitutes "punishment."

To take the last first. That there is a want of agreement, or, rather, absolute disagreement as to the signification of the term punishment is demonstrable from Dr. Mercier's language with respect to certain minor penalties in common use in asylums: "I say these measures you take are punishment; you say they are not." Now who is right? Debate on any subject is useless unless there is agreement as to the meaning and scope of the terms employed in the discussion. And as long as men hold, as they appear to do, diametrically opposite views as to the nature of punishment, any argument as to its utility or otherwise can only prove abortive.

But is it impossible to effect a concurrence of opinion on this point? To acknowledge this would, to my mind, be a most humiliating admission. Common sense often solves a difficulty which to high science seems insuperable. It is admitted pretty generally that much the same principles of treatment are applicable in the case of children and of insane persons. In the one the power of self-control is not yet developed, in the other it has been lost; in both it requires to be trained and disciplined. When we say to a child, "You have been naughty, you shall not have any sweets at dinner to-day," or, "You shall not go for a ride with the others," surely that is punishment—punishment of a negative kind, punishment by deprivation, but as

certainly punishment to the child as if it took the positive form of bodily chastisement. The effect upon the child's lachrymal apparatus, which often immediately follows, is sufficient proof of this. And if we say to an insane person, "You have not done any work to-day, and have been doing mischief instead; you shall not have any tobacco," or, "You have been using bad language and tearing your clothes; you cannot go to the dance or the circus to-night," are not the two cases precisely analogous? To say that a line of action which in the one case is called, and meant to be, punishment should in the other be styled "treatment," or "aid to control," or any other plausible euphemism by which men succeed in cajoling themselves into the belief that a thing is not what it really is, is not without an element of the ludicrous, and is as illogical as it is disingenuous. Dr. Mercier has the courage of his opinions, and calls a spade a spade, and immediately his *confrères* are up in arms. Such candour is unwelcome. Call it a "method of treatment," "withdrawal of privileges"—anything you like, but the word punishment must not be breathed in connection with the treatment of the insane!

I venture to offer what I think I may without arrogance claim to be, at any rate, a fairly good working definition of punishment as "any measure which is employed for the correction of faulty behaviour by the deprivation of what gives pleasure, or the infliction of what causes pain." The definition includes the object aimed at and the means employed; and as regards the former I have used the phrase "employed for the correction of faulty behaviour" in preference to "employed as an aid to self-control," because I believe that the punishment should have an immediate relation to the behaviour, a relation which can be made quite intelligible to both the child and to the insane (that is, to those of the insane to whom punishment is applicable, for I do not for one moment contend that it is universally, or even generally, applicable), whereas self-control is an ulterior object which is intended to follow the corrective measures, but the nature of which would probably be about as comprehensible to either child or insane person as the nature of Hebrew inflections.

Dr. Noott, who in this matter is an opponent of the views of Dr. Mercier, is scarcely consistent in his contention that

such measures as the withdrawal of "various inducements to good behaviour, such as an allowance of tobacco, pocket-money, &c., should not be considered punishment at all," for he concludes his paper with these words: "It seems to me that the bestowal and withdrawal of privileges is used in asylums *exactly in the same way* as a similar system is used in the nursery for the purpose of training," for the promotion or re-establishment of self-control. But is Dr. Noott prepared to maintain that the withdrawal of privileges is not regarded—invariably regarded, both by parent and child—as punishment? And if the application of such a measure is used in asylums "exactly in the same way," why shrink from the inevitable conclusion? Dr. Noott's system of the "bestowal and withdrawal of privileges" is, in fact, our old friend the system of rewards and punishments under a thin disguise. But our flesh must not be made to creep by the use of the term punishment.

If, then, the definition of this term which I have ventured to give be accepted as a fair one, the next thing to consider is whether punishment is admissible in the case of insane persons. The answer will depend on what view we take on the question of "partial insanity," or, what is much the same thing in this connection, partial responsibility. Here again we are confronted with a disharmony of opinion just as emphatic as that which obtains with respect to the definition of punishment. The extreme views on either side have been expressed in the discussion already alluded to. Dr. Noott—and the majority of asylum superintendents present seemed to coincide in his opinion—contended that "the medical profession generally not recognising the term 'partial insanity,' as understood by lawyers, maintained, and I think rightly maintained, that all forms and degrees of insanity should constitute irresponsibility." On the other hand, says Dr. Mercier, "the whole of this discussion pivots on one point, which I thought had been abandoned even by the laity, but which appears to remain clinging to the minds of some of my *confrères*—that when a man is insane he is totally insane, a completely altered being. A man may be insane to a very trifling extent, and over a very large sphere of his conduct he may be responsible; and if in this sphere of his conduct he commits wrong he ought to be punished." Judging from the remarks of individual speakers the weight of medical

opinion would seem to be (at present) against Dr. Mercier. I feel bound to say that whether the subject is approached from the side of abstract reasoning, or from that of practical observation and experience, I feel myself compelled to agree entirely with his views. To those who think with Dr. Noott that "all forms and degrees of insanity should constitute irresponsibility" I would say, can you, can anybody, determine when a man begins to be insane, and therefore, according to your way of thinking, irresponsible? Occasionally, as we know, the onset of insanity is of an acute fulminating form, but such cases are comparatively rare. More frequently the onset is gradual and insidious. A man who appears perfectly sane, say in January, is sent to an asylum in May. During the interval his symptoms have been developing; but for a considerable part of it he has continued to attend to his business as usual, to perform the ordinary duties of domestic life, his cheques have been correctly drawn and honoured, his signature to documents has been received as valid. Only by his intimate friends has some strangeness of manner, some eccentricity of conduct been noticed, which, however, eventually become apparent even to strangers, until one day he finds himself in an asylum. Does his insanity, and with it his irresponsibility, date from his admission into the asylum? If not, when did they begin? Those who think with Dr. Noott that all *degrees* of insanity should constitute irresponsibility must, if they are logical, maintain that such a man is irresponsible from the very first day that the slightest change in his demeanour was noticed. And suppose that in a case of this kind the early symptoms of mental derangement did not advance beyond the first initial stage of eccentricity, that the man, instead of becoming a certified lunatic, developed into a mere oddity for the rest of his life, is he for the rest of his life to be considered irresponsible? If he happened to get into bad circumstances and should execute a forgery to deliver him out of his difficulties, would any judge or jury, or even any medical expert, sanction the idea that his oddity relieved him from responsibility? And yet that oddity is, without doubt, a degree, though a mild degree, of insanity. The doctrine, then, that all *degrees* of insanity should constitute irresponsibility seems scarcely consistent with reason, or with the facts of daily life.

But are all *forms* of insanity to be regarded as constituting

irresponsibility? This is a position which I think is equally untenable. How many patients do we see who may have one or two delusions associated with some particular person or group of persons, but whose conduct and conversation outside the sphere of their delusions is perfectly correct? The mental condition of such patients may remain almost stationary for years, for the best part of a lifetime. I do not at all assert that there is not a profounder derangement of mind here than is evidenced by the mere existence of delusion. All authorities are agreed that there is. But what I do maintain is that such persons—monomaniacs or paranoiacs—often can and do regulate their conduct on the recognised principles of right and wrong which are current amongst sane people. I have known many such cases to have very tender consciences on questions of right and wrong, who could not be induced to do a wrong action by any amount of persuasion. Now ought such patients to be properly regarded as irresponsible except with respect to conduct which has relation to their delusions? These are cases to which, in my opinion, the legal view of responsibility is applicable; true cases of "partial insanity." The mistake which from a medical point of view lawyers make is in insisting, as so many of them do, that a rule which may be fairly applicable in cases of partial insanity shall be applied in all forms of insanity.

Take again cases of "moral insanity." This term is objected to by many authorities; notably by Prof. Benedikt, who thinks it should "disappear from the vocabulary of science." Be that as it may, it is a convenient term for those cases of insanity in which defect or perversion of the affective nature of the individual preponderates greatly over intellectual derangement, which is often so slight as to be scarcely perceptible. There are a few such patients in every asylum. Many of them have been in gaol more than once. They belong to the borderland in which crime and insanity hold mingled sway. They are most difficult cases to deal with, and in an asylum they not only act badly, often outrageously, themselves, but they are active agents in demoralising others. And it is in this class of patients that I think punitive measures are often attended with very good results. There are *mauvais sujets* inside as well as outside asylums; and I believe it is the worst policy to let such persons have their fling, and do just as they please, when a little well-timed punishment effects a change for the better in their

demeanour. Mild methods occasionally succeed, such as the deprivation of tobacco, tea, or amusement, but they usually fail in the end, when something of a more positive character must be tried. Such patients are, as a rule, keenly alive to their own comforts, and strongly object to be made uncomfortable. Restraining their movements by camisole, or gloves, or both, has often a most beneficial effect, and, after a comparatively short experience of the discomfort, they come begging to have them removed, and promising that they will be good ; and they generally keep the promise—for a time at least. You must just let them know you are in earnest. Here is an instance :

E. M—, sent from the workhouse to the asylum, a typical case of moral insanity. Can behave and work well when she likes, but at others is most abusive, mischievous, turbulent, and refractory ; has a perfect genius for devilry of all sorts, and is an accomplished liar. She has run through the *gamut* of most of the performances common amongst patients of this class, such as smashing windows, setting fire to clothes, flinging contents of her chamber over nurses, spitting tobacco juice out of her mouth into the food of other inmates, pounding the door of her room all night, and yelling at the top of her voice for the express purpose of keeping everybody awake, mutilating herself, not, I think, with any deliberately suicidal intention, but rather for the purpose of giving trouble, and, perhaps even more, in order to ensure a good deal of attention being paid to her, and so forth. This patient has, I regret to say, been some twenty years under my own observation, and I cannot accuse myself of having left a single stone unturned in the way of propitiatory measures to try and induce her to alter her behaviour. She has been kept on the best diet, with extras such as eggs, porter, rice, &c. ; tobacco, oranges, sweets, gentle expostulation, persuasive arguments, appeals to her on religious grounds, have all been tried—times without number—with only very partial success. During her milder paroxysms of passion they have often, apparently, had some effect, and she is sometimes in the best of humour with myself personally while cursing and denouncing others. But when she becomes thoroughly possessed with the spirit of devilry nothing ever succeeds in bringing her to her senses but some form of punishment, and the most effectual form is gloves and camisole. At

first she would wear these perhaps for a day or longer without giving in, but latterly even the threat of putting them on is generally efficacious, so much so that for a year and a half at least I have not had to employ them. But again and again I have been sent for by the night nurse at eleven or twelve o'clock at night with the tale that they could get no good of her. I would generally find her on the floor, positively refusing to get into bed, pounding her door, and shouting so that she could be heard nearly through the whole building. After vainly expostulating I have taken out my watch and said, "Now, Ellen, I will give you just one minute, and if you are not in bed lying down and quiet by the end of it, I will have the camisole put on." It is amusing to see how accurately she gauges the time. For the first quarter of a minute she is as one that heard not, and continues her vociferations; then she gathers herself up, slowly drags her unwilling limbs into bed, and pulls the bedclothes reluctantly about her. All the time the loud shouting has been toning down to subdued denunciations—curses not loud, but deep—until finally a few hoarse mutterings close the scene, and there is quietude for the rest of the night. Occasionally when I have left she bursts out again, when I always go back, order the camisole to be put on, and, even if it does go on, when the last lock is being secured she invariably says, "Take it off; I'll stop," and she does stop.

Now this is a clear instance of the good effects of punishment. No one can say that this patient does not grasp the situation perfectly and regulate her conduct accordingly. No other motive except that of escaping punishment has any effect in checking and controlling her outrageous conduct, and it has a very decided and immediate effect. Through its means she herself and every one else within earshot get a good night's rest, so that the punishment in this case is twice blessed, and, speaking from ample experience, I should consider myself culpable if I did not employ it on every such occasion.

In days gone by, before the rigid rules as to the temperature of baths came into force, I sometimes found a cold bath a most valuable remedy given as punishment, and, as in the case of the camisole, even the threat of it was quite sufficient. I have used it in a somewhat similar case to the last, when all conciliatory measures had failed. This patient was

also an instance of moral insanity, but differed from the first in having some definite delusions. She had been brought up in the workhouse, and had been in gaol more than once for disorderly conduct in the streets and for assaulting the police. She is a low-sized woman, not much over four feet high, but a perfect little fiend when roused, biting and kicking viciously, so that it has often taken four attendants to control her. On one occasion, a good many years ago, when she had become quite unbearable, I ordered her to be immersed for about a minute in a cold bath, and it had an immediate effect in promoting good behaviour. Once or twice since then it has been quite enough to threaten it; for instance, on one occasion, when she had been behaving extra badly, and had to be removed from the day-room, I met the attendants bringing her down the corridor struggling and trying to bite and kick them. Without the slightest intention of carrying out the terrific threat, I said, in a determined manner, to the attendants, "Just take her and duck her, clothes and all, in the bath." She immediately called out, "I'll be good, I'll be good," exactly as a naughty child would do when conquered by superior force, and she conducted herself perfectly well for the rest of the day.

The same remedy I used to find very effectual in two other classes of cases—male patients with strongly combative propensities, and those who, through sheer indolence, wet their beds at night.

A powerful patient had been subject to epileptiform fits for two years, when they ceased, and were replaced by paroxysms of violence. After some considerable time these too ceased, or occurred only in a mild form; but he continued to have, like most epileptics, a very high opinion of his own powers—his physical strength in particular, and used to take delight in asserting his superiority in this respect, challenging attendants and patients to fight him, and sometimes striking them in order to provoke a quarrel. Nothing would induce him to work, which would have supplied an outlet for his superfluous energy. He was too proud for this. Though a farmer's son, he thinks it beneath him to do labour of any kind. Latterly his thirst for fighting has not been so marked, but some years ago, when he used to begin to strike patients in order to incite them to retaliation, a cold bath had always a most salutary effect. It acted as a cooler to his passion, and had, moreover,

a decidedly good moral effect. He was quite a different person after it.

Take another case. A robust and comparatively young man began to wet his bed at night. He was got up by the night attendant, but would not use his chamber, and went back to bed and soaked it shortly after. After three or four nights' trial with remonstrance but no improvement, he was told that if he repeated the offence he would be taken up and given a bath. He did repeat it the next night, and was given the bath. The bed-wetting ceased immediately, and for a long interval. When he began the same game again the same remedy was tried, with a similar result, and now, for many years past, there has been no recurrence. Now here was a case which would certainly have drifted into dirty habits if it had not been promptly checked—checked by punishment. Is it not a moral no less than a physical gain to the individual himself to enable him, even in this way, to regain his self-control? A remedy which most of us probably use in our own case as a matter of daily routine can hardly be called severe, and I have often regretted that such a rigid restriction should have been laid down with respect to the use of a cold bath. No doubt the authorities had in view the danger of abuse on the part of attendants. I believe, however, that risk on this head would be infinitesimal under the present conditions of asylum management; and as the majority of patients in whose case it might possibly be employed are just the class who are wont to make complaints of the slightest maltreatment, even of the most trivial kind, there is not much likelihood of any illegitimate use of the remedy escaping detection.

From the foregoing remarks I do not wish it to be inferred that I am an advocate for anything like the indiscriminate employment of punishment in asylums. On the contrary, the cases in which it is admissible are few and exceptional, but in these I believe it to be justifiable and even necessary. My object is chiefly to protest against any hard and fast rule that punitive measures should never be employed under any circumstances whatever, and I think that the principles which guide us in the use of restraint are those which we should act upon in the case of punishment. (Is not restraint largely punishment?) In both cases the less the better; if possible, none at all. But if circumstances call for the use of either, then there should be no

hesitation in using them. There are some authorities who consider restraint in any form unjustifiable, no matter how urgently it may seem to be called for. I remember, some years ago, an esteemed superintendent, who was wedded to what he was pleased to call the "non-restraint system," saying to me, "I would rather see every pane of glass in this establishment broken than allow any means of restraint to be applied to a patient." Apart from the question as to whether the interests of ratepayers are to be absolutely ignored in order that the destructive instincts of a patient may have free play, I doubt very much if it is for the patient's own interest to give him *carte blanche* in this way. When we read in the annual reports of some asylums the stereotyped statement that "no restraint and no seclusion were employed during the past year," we can only stand in humble wonderment at the admirable management. But the thought will obtrude itself—what sort of a time have the patients had? To compel a considerable number of quiet and often sensitive patients to remain in the society of the turbulent and destructive, or the blasphemous and obscene, is, to my mind, a much worse piece of cruelty than to place under restraint or in seclusion, or even to punish, if necessary, gross offenders of this class. Patients have sometimes implored me for God's sake to relieve them of the presence of such obnoxious companions, and I must say I cannot see why they should be subjected to such annoyance merely for the sake of carrying out a slavish adherence to any so-called "system," however excellent it may appear—on paper.

We are too apt to regard insanity in the abstract, as many of our best writers on the subject have repeatedly insisted upon. There is really no such thing as insanity, no such thing as responsibility. These are merely convenient abstract terms representing groups of phenomena. What we have to deal with is a concrete individual. Is this particular person insane? Is he wholly insane? Is he irresponsible? Is he amenable to the ordinary measures we employ in the case of sane people for the punishment of evil-doers and for the praise of them that do well? Ought he to be punished? These are the questions we have to ask in each particular case where ill-conduct has to be reckoned with, and on the merits of each particular case alone should our decision rest.

It will help to put a clear issue before the meeting, per-

haps, if I summarise the views advanced in this paper in the form of two or three propositions :

(1) There is such a thing as partial insanity, and the form and degree of mental derangement have a direct bearing upon the question of responsibility in any particular case.

(2) If, admitting this hypothesis, there are substantial grounds for regarding an insane person as responsible in part for his conduct, then, in the case of wrong-doing unconnected with the limited sphere of conduct within which his insanity operates, punishment is justifiable.

(3) The term punishment is held to indicate any measure employed for the correction of faulty behaviour by the deprivation of what gives pleasure, or the infliction of what causes pain.

At the commencement of this paper I alluded to the value of common sense in solving knotty points which science may fail to disentangle. And I cannot select a better example of good, sound common sense in connection with this difficult subject than the words used by Mr. Justice Wright at Warwick, in 1892, when he said that "the responsibility of an accused person must depend upon the answer which must be given to the question, 'Could he help it?'" The illustrative cases which I have brought forward show that in some instances, at all events, insane patients can and do help doing wrong when appropriate measures are taken to prevent their misconduct. I ask, why should not such means be employed in every such case where conciliatory measures fail to effect any improvement? The object achieved is a worthy one, and in this instance at least I am prepared to maintain that the end justifies the means. The criterion laid down by Mr. Justice Wright is one which I think ought to commend itself to every one who has to solve this question. It is simple; it is fair. It is, in fine, common sense of the first water.

Discussion.

At Spring Meeting of the Irish Division, April, 1899.

Dr. Finegan observed that this subject had been before the alienist branch of the profession for many years. He for one would not join in the general cry that punishment was always injurious to patients. He had a case in seclusion for over nine months, with occasional trials out, for the very simple reason that the patient could not be controlled in any other way. He (the speaker) had been remonstrated with, but notwithstanding he considered this treatment, which many called punishment, the best at his disposal in this case.

Dr. Donnellan instanced cases in which a little restraint and a little punishment might be useful. Amongst others was the case of a patient who suffered from hallucinations and became very violent, and attacked other patients, and

generally got the better of them. However, another patient at length retaliated on one occasion, and gave him a very good thrashing. He had never tried violence again.

Dr. MILLS expressed himself as in doubt, in the case of a patient who acted thus continuously and did not desist, whether punishment was justifiable.

Dr. REVINGTON would divide the paper into two parts. They were perfectly justified in stopping all the pleasures and privileges of patients as a punitive measure; but when they came to the infliction of pain, he did not think that course would be acceptable to the public or the superintendent of any asylum. The speaker had to deal at Dundrum Asylum with more troublesome cases than any one present, people to whom no good can be done by kindness, and that seem to deserve punishment. He could manage without punishment in the sense of inflicting pain, and where that could be done in a criminal asylum it ought to be feasible everywhere. The deprivation of pleasure and seclusion he would approve of. Seclusion in a dark room was most effective. He could not approve of the cold bath treatment, and he had done away with it in Dundrum.

The CHAIRMAN said the meeting was glad to hear the experience of Dr. Revington. There were present a couple of representatives there of private asylums, and he dared say the members would be glad to hear whether this question exercised the minds of the physicians of such institutions. For himself he was glad to have heard so fresh an exposition of the subject from one of their own members. The question of the punishment of the insane is one which has assumed much interest of late. On the one hand they had the old school, among whom the speaker was brought up, who, educated to abhor the cruelties of earlier days, protest against the use of such a word as punishment in connection with insanity. Men of this way of thinking say, if you admit punishment you must be prepared to defend many of the old practices which we all now consider wrong. You place yourself in the illogical position of inflicting punishment on those who are counted irresponsible, and, what is more important in practice than either of these theoretic considerations, if you allow punitive measures in your asylums all kinds of cruelty will be practised by the subordinate staff. On the other hand, Dr. Mercier, who approaches this subject with his usual vigour, freshness, and contempt for cant, says you already punish; you deprive of liberty; you deprive of various luxuries and privileges; you manage your asylums by a carefully planned scheme of rewards and deprivations of rewards, and all these refusals and deprivations are really punishments, only you have not the courage to say so. There is some truth in both these views, and there is, it seems to me, a mode of looking at the question which admits of their reconcilement. Punishment may mean either of two things; the exposure of the object to the consequences of his own acts, or the personal vengeance of the administrator of punishment against the object—of the strong against the weak. In the former sense of punishment, nature may be said to punish all of us, and that quite as often for sins of ignorance as for sins of will. The latter form of punishment is particularly human (and inhuman). All codes, having probably commenced in the laws made by some one tyrant for his own ends, originally contained much of this element of vengeance. The gradual mitigation of the old savage laws is a recognition of the principle that even society has no right to a vengeful assertion of its claims. Now, applying this notion, we may say that the mode of punishment that we protest against for our patients is the vengeful one, while we may admit that in a mild and modified way we use the second form, allowing those of our patients who have capacity for distinguishing, or who have any control, to feel that the consequences of good or of bad behaviour will not be indifferent. There are immense practical difficulties in inflicting punishment of any kind in asylums. Punishing the patients is demoralising the attendants. He was in an asylum years ago where the cold bath was used. He was sure it did a great deal more harm than good. He was reading the other day in the life of Dr. Pliny Earl, recently published, an account of his travels in France in the year 1838. That humane physician expressed his surprise and dismay to find that Leuret, the successor of Pinel, and on the very scene of Pinel's humanitarian triumphs, was "treating" the deluded by douching them till they denied their delusions, and making the lazy promise to work by the same process. Any sentimentalism is surely better than this senseless cruelty, for it can be called by

no better name, though we are sure its author's motives were not cruel. Even in our own time, who can have forgotten the astonishment and pain with which we read how, in a country which rightly boasts of being in the van of work for the insane, it was proposed, if not practised, to punish lunatics by the administration of hyoscyamine, by the use of Epsom salts, with or without assafœtida, and the stomach-pump, by emetics, by cropping the hair, depriving the patient of snuff or tobacco, clothing him in a ragged suit, &c., or causing him annoyance by fastening a heavy bag of sand to his back and compelling him to carry it about? The gentleman who proposed these measures went on to say with evident pride, "I have never known one or other of these means to fail after kindness, coaxing, and bribery had no effect whatever."

Dr. DRAPES said that he had brought the subject forward more with the intention of having the matter discussed than for the purpose of advocating the general application of punishment. With regard to the cold bath in every ward, he was as much opposed to that as any one could be. He did not give a cold bath in two years except when required, and when used the effect was good. As regards the question of prolonged seclusion, he objected to it also. A feeling of vindictiveness or revenge did not enter into his mind in applying a cold bath or other treatment; it was simply used as a corrective. As to demoralising the attendants, they should be kept in sufficient discipline to make them afraid of using these measures on their own initiative; and under such circumstances he did not think they would use them without getting orders.

Notes on an Epidemic of Colitis at the Derby County Asylum. By R. F. LEGGE, M.D., Medical Superintendent, Derby County Asylum.

DURING the year from May, 1898, to May, 1899, 26 male and 28 female patients in the Derby County Asylum were attacked with the disease variously known as dysentery, dysenteric diarrhœa, or colitis, and characterised clinically by bloody stools and rise of temperature, and in advanced cases showing in post-mortem examination extensive thickening and ulceration of the lower end of the large intestine, with numerous microscopic hæmorrhages into the submucous layer. Of the 54 attacked, 23 died, in 13 the colitis being apparently the direct cause of death, in 10 a contributory cause. Some brief notes of our attempt to ascertain the cause of the outbreak may be of interest, though the results obtained were mostly negative or inconclusive.

The first difficulty is to know with what disease we really are dealing. Formerly cases of this character were usually described as dysentery, and were supposed to be identical with, or similar to, tropical dysentery. A doubt of the correctness of this opinion seems to have led to the adoption of the term

colitis, which, though it does not commit us to any opinion as to the ætiology of the disease, is, I think, not satisfactory as an inclusive description. In the epidemic under consideration 19 autopsies were held. In 5 cases changes of the large intestine only were found ; in 4 cases changes of the small only ; in 9 cases changes of both intestines ; in one mild case, complicated with other diseases, no change could be found ; in one case the stomach was ulcerated, and in one it contained hæmorrhages. The changes in the large intestine ranged from well-marked patches of congestion to complete destruction of the mucosa over large areas, the worst examples being usually in the rectum. In the small intestines there were small, sharply cut ulcers, or sometimes injected patches easily seen in the fresh gut, but difficult to recognise after a preservative fluid had been used. In one case small nodules like swollen solitary glands were seen. Furthermore colitis is a term seldom or never used by general practitioners, and an opinion is held by many that the disease occurs almost exclusively in asylums.

7760 deaths were registered in Derbyshire in 1897 ; of them 96 were from "typhoid fever," and 32 from "dysentery" in adults. It seems more probable that most of the latter and perhaps some of the former were identical with colitis, than that asylums have a monopoly of this. Perhaps some of the 295 deaths from "infantile diarrhœa" may be of similar origin. Of the persons attacked with colitis here, 3 were apparently quite healthy previously (one was a nurse), 8 or 9 were epileptics or dements below the normal standard of health, and the remainder were either old or very feeble, or suffering from other organic diseases.

In looking for a cause for the epidemic I assumed that the disease was due to a micro-organism, and probably introduced into the body by the mouth. The incidence of the attacks gave little help. All the wards, old and new, afforded cases, a preference being shown not for those wards where cases have occurred almost annually for at least sixteen years (probably much longer), but for those inhabited by the feebler patients, and irrespective of their sanitary arrangements. At first males and females were attacked impartially, then a series of 19 cases occurred on the female side ; finally, of the remaining 23 cases, 21 occurred on the male side. The drainage of the asylum appears to be perfect, and was completely reorganised a few

years ago. Some of the cases when attacked were on ordinary diet, many on milk diet only. Possible sources of infection were water (deep well, loaded with sulphates and carbonates), milk, pork, contamination of food with excreta of infected patients, direct infection from one patient to another. Attention had been directed to the pork by an epidemic, among the asylum pigs, of a disease marked by bloody stools and urine, and showing, post mortem, ulcers and hæmorrhages of the intestinal mucosa, and hæmorrhages into the kidneys. As the pork (cooked) and the water were found, on bacteriological examination, to be sterile, and as all the milk supplied to the patients has for several months been previously boiled for fifteen minutes, these causes were eliminated. Special precautions were taken to prevent contamination of food or direct infection. Occurring cases were isolated for months in a detached building, rigid rules as to nursing of patients and disinfection of clothing, skin instruments, and excreta were insisted on ; waxing and dry scrubbing were adopted on floors previously scrubbed, but the epidemic was not sensibly affected.

Among the drugs employed were izal, calomel, opium, Dover's powder, quinine, iron, chalk and opium powder, castor oil, ipecacuanha, and salol. The ipecacuanha was given in doses of twenty or thirty grains of the powder, and appeared to modify the hæmorrhage and diarrhœa. It is doubtful if any benefit was derived from the use of the other drugs, whether given by mouth or by rectum. Injections of hydrogen peroxide are now being tried. Opium I look upon as doing more harm than good, at least in insane patients.

A specimen of ulcerated bowel from a colitis patient was sent (at the suggestion of the Medical Officer of Health for Derbyshire) to the Jenner Institute, for bacteriological examination, and a report was received to the effect that the *Bacillus enteritidis sporogenes* was present.

A very clear and full account of this organism by Klein will be found in the report of the Medical Officer of Health to the Local Government Board for 1897–8, which I here summarise so far as it concerns my purpose.

In October, 1895, an anaërobic, spore-bearing bacillus—*Bacillus enteritidis sporogenes*—was isolated by Klein from cases in an outbreak of hæmorrhagic diarrhœa at St. Bartholomew's

Hospital. Andrewes found the same organism in sporadic cases of severe diarrhœa, but failed to find it in evacuations of ordinary diarrhœa. Klein obtained no positive results looking for spore of the microbe in the intestinal evacuations of healthy persons. He found it in the intestinal contents of 4 out of 10 cases of infantile diarrhœa, and seems to think it was present, though not detected, in the others; and he found it in all but 2 of 8 cases of cholera nostras. In March, 1898, another outbreak occurred at Bartholomew's. There were 144 cases of severe diarrhœa, frequently with a great deal of mucus and blood. All recovered. All the stools examined contained rods and spores of B. E. S. in great abundance. Both epidemics were traced to the milk-supply. Of ten samples of milk purchased in London, eight yielded cultures of B. E. S., four of them virulent, two contained the non-pathogenic *Bacillus butyricus*. More remarkable, the B. E. S. was found in some samples of "pure sterilised milk." Samples of ordinary sewage in every case contained the microbe; it is found in horses' dung, and in earth from manured fields; it is not, however, found in the dung of cows or pigs. The bacilli are rods from 1·6 to 4·8 micra in length, they readily form spores, and pure milk cultures are easily obtained in an atmosphere deprived of oxygen. Three or four minutes' boiling will kill the spores from an artificial culture, but those from the intestinal contents may require six or even ten minutes' boiling to kill them. The pathogenic effects on rodents are very marked. After subcutaneous injection there are gangrene of the subcutaneous tissues and copious sanguineous exudations, with accumulation of a large amount of gas. An important point is that the organism varies greatly in virulence, being sometimes very feebly, and sometimes very strongly virulent. This difference is due to its sporing or non-sporing state, to climatic conditions, and perhaps to other causes. The non-virulent kinds sometimes form cultures which are atypical, and differ much from typical cultures.

The mode of cultivation in milk is as follows: about 15 c.c. of sterile milk inoculated with the suspected material and plugged with sterile wool is placed in a test-tube, and heated to 80° C. for ten to fifteen minutes; the heating excludes all non-sporing microbes, and leaves only the spores of aërobes and anaërobes. The tube is then cooled and placed in a larger tube (such as a urine glass) containing 2 drachms of pyrogallic

acid to which 2·5 c.c. of strong liquor potassæ has been added. The outer glass is closed by a rubber stopper, and in consequence of the absorption of oxygen by the acid the culture takes place in an atmosphere free from that gas, and the aërobes are excluded. The whole is then incubated at 37° C., and in about a day characteristic changes occur. These are chiefly—a large number of gas bubbles in the upper layer, by which the cream is torn up, and stringy masses of coagulated casein formed ; a colourless and clear whey below, with casein coagula ; a smell of butyric acid ; an acid reaction ; and, microscopically, numerous rods, some of which are motile. Thresh describes a method in which the outer tube is dispensed with and oxygen excluded by pouring melted vaseline upon the surface of the milk ; in this case the vaseline plug is blown out by the gases which are formed during the process of culture. The plan is cheaper, but somewhat messy.

The organisms with which the B. E. S. is most likely to be confounded are the B. of malignant œdema, the B. of symptomatic charbon, the *B. butyricus*, and the B. of tetanus. By ordinary cultural and microscopic tests the B. E. S. may be distinguished from all of these except the *B. butyricus*. From the latter organism, unfortunately, it cannot be certainly distinguished except by inoculation on animals, when it is recognised by its virulence.

The discovery of the B. E. S. in the stools of the patient suffering from colitis, taken in conjunction with the observations of Klein just mentioned, raised a strong presumption that this organism might perhaps be a cause of the disease, and I undertook a series of milk cultures in the hope of determining this point. Portions of stools from infected patients and of the intestinal contents of patients who had died from the disease (eight patients being experimented upon) were tested, and in every case typical cultures were obtained. Sections through ulcerated patches also showed, in the submucous layer, bacilli microscopically resembling the sporogenes. Samples of milk (boiled, and as supplied to the patients), of boiled pork, of boiled potatoes, of tinned meat, were sterile when tested by this method. Certain uncooked vegetables (such as pickled cabbage), and a sample of bovril developed numerous anaërobic bacteria, but failed to curdle the milk. The excreta from one healthy patient gave an atypical culture. So far the experiments pointed

strongly in the direction expected, but on submitting the excreta from three other patients and an officer, not suffering from colitis, to the test, typical cultures were obtained. Three further specimens were sent to the Jenner Institute, where the final test on animals could be performed. In one of the cases, which finally proved fatal, I received the report that the culture was "moderately virulent;" in the others, which were mild cases, the cultures were said to be "slightly virulent."

The conclusions which I form, therefore, are either that (1) the B. E. S. is not the cause of colitis, or (2) that the virulent form of the organism is the cause of the disease, while the non-virulent form is widely distributed in asylums (I found it in the sweepings from the wards), or (3) that it is capable of producing the disease in patients who are enfeebled, or otherwise specially predisposed to act as hosts, but less so in healthy persons. I think there is sufficient probability in the second or third of these suppositions to encourage further research. This should take the direction of testing the comparative virulence of pure cultures obtained from colitis patients, and from those apparently healthy. It could, of course, be done only by persons possessing a licence under the Vivisection Act. If further researches should show the sporogenes possess a causal relation to colitis, the wide-spread nature of this organism will render the prevention and treatment of the disease very difficult.

Clinical Notes and Cases.

A Case of "Circular Insanity" in which the Duration of each Phase exists for only One Day. By P. MACLULICH, M.D., Junior Assistant Medical Officer, Joint Counties Asylum, Carmarthen.

THE following case is of interest, as it illustrates, firstly, a rather uncommon form of "circular insanity," namely, that in which the duration of each phase lasts for only one day; secondly, the fact that no history can be obtained of hereditary influence, for direct heredity usually bears a very close relation-

ship to the majority of these cases; thirdly, that the attack did not commence until the patient was thirty-five years of age, whereas similar attacks are usually first noticed about the time of puberty, and rarely after the age of thirty; lastly, in that the patient's menstrual periods bear no definite relationship in their occurrence to either the stage of "depression" or "excitement."

The patient, Mrs. D—, at present aged forty-five, was admitted into this asylum on June 3rd, 1896. The duration of her attack up to that time was about seven years; and it was owing to the fact that her late husband, who was a Wesleyan Methodist minister, was at the time in a dying state, that she was brought here as a private patient. She is the mother of three children—one boy and two girls. The former is said to be very bright and clever, while one of the latter is "delicate;" but all three of them are sound mentally.

Family history.—As far back as her great-grandfather no insanity can be traced in any branch of the family; beyond them nothing is known. There is no history of gout, diabetes, asthma, paralysis, fits, hysteria, suicidal or homicidal tendencies; and neither did she nor any member of the family ever suffer from intemperance. Her mother, and also her only sister, died many years ago from phthisis; there is also a phthisical history on the paternal side.

Personal history.—The patient is well educated, and spent three years of her school life in Germany. While there she evidently outgrew her strength, becoming delicate in health, tall and slight of figure. For the first time, too—that is when she was nearly sixteen years of age—she showed signs of spinal deformity; also about the same time she fell when walking, and hit the back of her head heavily against the ground, but was not rendered unconscious by the accident. She was never of a gloomy disposition; occasionally she became excitable or hysterical, otherwise she was always considered to be a strong-willed individual. After her marriage she led a useful and very happy life, being devoted to her husband and children; and it was not until about seven years before her admission here that her present insanity manifested itself. The onset was sudden, and was caused through fright, this latter being produced by a woman pointing a revolver at her while she was in a neighbour's house; and immediately after this she

became excitable and incoherent in speech. It is very probable that the patient was unduly frightened because of the fact that her father died many years previously from the result of a revolver wound.

(*a*) PRESENT PHYSICAL CONDITION.—The patient is thin and slight of figure—height, 5 ft. 8½ in.; weight, 8 st. 7 lb. There is marked dorsal kyphosis present in the region of the seventh, eighth, ninth, and tenth dorsal vertebræ, and the sternum also is greatly depressed on account of this spinal deformity. She is of a dark ruddy-brown complexion, quite out of keeping to her daily mode of life. The hair of her head is extremely coarse, straight, black, and streaked with grey. Her ears are large; malar bones very prominent; mouth very wide; and both palpebral fissures extremely small in the vertical direction. From very careful examination of her body no evident stigmata of degeneration can be said to exist. The general form of her cranium is dolichocephalic, the length-breadth index being 76·6. A depression, which extends chiefly to the left of the median line, can be easily felt over the occiput.

i. *Respiratory and circulatory systems.*—Good.

ii. *Digestive system.*—Appetite rather capricious, but does not vary from day to day; tongue clean; does not suffer from constipation, this latter being a common complaint in similar mental conditions.

iii. *Speech and gait.*—Normal.

iv. *Tremors, tics, &c.*—Absent.

v. *Knee-jerks.*—Exaggerated.

vi. *Urine.*—Sp. gr. 1025; acid; no albumen or sugar present.

vii. *Menstrual periods.*—Regular, painless, rather profuse, and occur during *either* phase of the attack.

(*b*) PRESENT MENTAL CONDITION.—I. *Period of depression.*—This is marked by listlessness and stupor. The patient sits with her back to the light, shading with one hand her eyes, which are half closed; also she will not speak during the whole day. To all appearance she seems to take no notice of events occurring about her, presenting instead an extremely sad and weary look. But, nevertheless, on the following day she will narrate any unusual occurrence, &c., which may have taken place; and she also is capable of estimating the length of time she spent in any given place,

clearly showing that she was on the alert to everything occurring around her when in this state of stupor. If asked a question she will not answer it, or take any apparent notice of the interrogator's presence; but if roused, or the questions are persisted in, she will show her resentment by gestures only. The patient will not voluntarily go to her meals or move out of any one position. She also becomes dirty in habits and destructive. During the early part of the night she frequently sits on the side of her bed, with the bedclothes tossed about and her night garments unbuttoned, or only half on. Her sense of propriety, too, is diminished; *e. g.* if a stethoscope is produced when she is in bed she will attempt unnecessarily to strip off *all* her garments, in order that her chest may be bared for auscultation.

The patient never develops any fits, or becomes suicidal or homicidal during either phase of the attack.

The transition from this stage to the next one is sudden, and always takes place during the night-time, generally from one to two o'clock; but sometimes it occurs as early as 11.30 p.m., or even as late as 4 a.m.

II. *Period of excitement.*—The patient has an exalted opinion of her "figure," "good features," "musical capabilities," or her "accomplishments," &c. She states that she is worth £2000 a year, and she sometimes expresses the fear that some unprincipled persons may at any time attempt either to poison or shoot her in order to obtain this money.

She has hallucinations of sight and of hearing—*e. g.* she sees her mother or relatives, and hears them talking to her. The patient becomes hypochondriacal during this period; she "aches all over," has various "tumours," is "not well or strong," &c., and also states that she has been the subject of many and various diseases during her lifetime. She talks incessantly, generally incoherently, and usually about her past life or her relatives, choosing then for her principal topic their individual illnesses. If asked a question, she will begin to answer it all right, but soon wanders from the subject, the transition being rapid. She struts about the wards or airing-court in a vainglorious manner, attempting by studied attitudes or expressions to attract the attention of those near her. She is demonstrative in her affections, but her feelings are not hurt if she is repulsed. Her habits become clean, and she is no longer destructive. Her

memory for past and recent events is extremely good. She will not occupy herself in any useful way; her chief aim and object seemingly is to become the centre of attraction to those around her. She expresses a real affection for her children and her late husband, differing thus from the majority of patients who suffer from this disease.

About midnight again there is a sudden transition, and the patient is back once more into the stage of "depression," and so completes the cycle of the attack.

Case of Insane Homicidal Impulse. By D. F. RAMBAUT, M.D., Assistant Medical Officer and Pathologist, Richmond Asylum, Dublin.[1]

H. B— was admitted to the Richmond District Asylum in September, 1897. He was the youngest of ten children. The second child, a female, had epileptic fits which commenced at the age of twenty, and occurred frequently until she was thirty, when they ceased. The sixth child, a male, is the victim of alcoholism. The ninth died of consumption in the Richmond Asylum. Patient's father is stated to have been "eccentric, and the subject of morbid fancies." He died at the age of seventy-two years from cerebral apoplexy. H. B— belongs to the small farmer class. He is forty-eight years of age, better educated than the majority of his class, very intelligent, temperate, and affectionate to his brothers and sisters.

In September, 1878, he was treated in the Adelaide Hospital, Dublin, for phthisis, and seems to have made a good recovery. Since 1887 he has complained occasionally of a weight and sometimes a lightness in the frontal region, a general weakness and loss of appetite, and a certain restlessness ("I never felt easy unless I was walking about"), and a feeling of "fulness and internal swelling in his ears," unaccompanied by deafness or tinnitus. These attacks were a cause of temporary mental depression to him. Eight years ago and two years ago these attacks were accompanied by a pain which he located behind the sternum at the level of the fourth costal cartilage, and extending backwards to the region between the scapulæ. From September, 1896, until June, 1897, he remained in a fair state of

health. In June, 1897, he experienced one of these attacks of weakness, which began by profuse sweating, and was accompanied by loss of sleep. In August he thought the attack had almost passed off, when one day the feeling of "weight in the frontal region" and "fulness and swelling in the ears" returned in an aggravated form. In his own words, "I used to tremble, and felt as if I had had a fright; my heart was irregular, sometimes beating very violently, and at other times almost ceasing." Occasionally, too, at this period the thought that his cattle were about to die forced itself upon him. On the 16th September, 1897, he had hallucinations of hearing, which did not persist, and which he recognised as hallucinations. On the 17th September, 1897, when sitting on a reaping machine he said to some men who were working with him, "Do you know that Mr. R— is going to live on the top of the mill?" and "Did you hear that Lord R.'s mansion was going to fall?" He states that he felt compelled to make these remarks, though he knew he was talking nonsense. On September 18th, 1897, on his return from work he felt an impulse to strike his favourite niece. He resisted the impulse by walking up and down with his face turned from the child. On the following morning at 1.30 a.m. he awoke with a violent palpitation of the heart. His own words are, "This terrible beating of my heart lasted for about an hour; I felt a great desire to go in and murder my sister in bed. I dressed in a great hurry and ran out of the house, for fear I might injure my sister. I went to my brother's house and told him what had happened—I had then cooled down. I left him (I warned him not to come with me—I was afraid I might injure him), and then went to the Police Barracks and informed a policeman of my state, but he said, "Don't be foolish;" so I went away to the house of a friend, who permitted me to stay with him. I told him that I was afraid to go home—that I felt inclined to murder my sisters. I remained with him, but could not sleep."

At ten o'clock in the morning (September 19th) he became much worse, and had frequent impulses to injure anyone near him. He requested his friends to tie him down, and directed them to tie his body to the bed and his hands to the end of the bed. The impulse to strike coming on during the process of tying, he attempted to break the ropes and assault the man who was tying him down. These impulses returned

about every hour until the following day (September 20th), when he was removed to the Richmond Asylum, Dublin. He was able to warn those near him of the approach of the attack by an aura of cardiac anxiety and palpitation—a feeling of heat in the top of his head, and a feeling as if "something opened in the back of his head."

On the day of his admission to the asylum he felt the impulse a few times, but invariably requested the special attendant to hold him by the wrists. On September 21st he experienced the impulse four times. On September 22nd he was free from impulse, and slept during the night. On September 23rd he was five times possessed of an uncontrollable impulse to strike some one. The first occurred at 8 a.m. and lasted for eight minutes, the second at 10 a.m., the third at noon, and the fourth and fifth with an interval during the afternoon. The third occurred while I was talking to the patient. With a pained expression he said, "Move away, please!" Then he beckoned to the attendant and said calmly, "Hold me." He remained in bed, but his limbs became tense and his sad face became paler. The attendant still holding him, he turned his head to me and said, "I long to hit you." The attack lasted for ten minutes, and at the middle of that period it seemed to reach a maximum, for he clenched his teeth, and though held he raised himself into a rigid sitting posture and struggled to free his arms. When questioned during the attack he answered in a restrained manner, "I don't see anything peculiar—I don't hear anything peculiar, but a gradual inclination to strike comes over me, and it quickly increases in force." The attack passed off as it had begun, gradually, and at the end of ten minutes he said to the attendant, "That will do;" and to me he said, "That is enough—you need not be afraid of me now." He informed me that he had a soreness in the throat during the attack, which he located at the level of the supra-sternal notch. During the paroxysm no epileptoid phenomena were observable in his face, head, or eyes.

On the following day (September 24th) there were two attacks of homicidal impulse,—one at 6.30 a.m., which lasted five minutes, and a second at 10 a.m., which lasted for five minutes. He stated this day that he felt very weak, and he looked very sad. On September 26th the impulse came on him once, and lasted eight minutes. On September 27th he had two

attacks, each lasting ten minutes. On September 28th the impulse occurred once, and lasted fifteen minutes. On 29th October, 1897, he had an aura of the approach of the impulse without the impulse occurring. On the 10th, 11th, and 16th of November the frontal headache reappeared, but without the impulse.

On February 11th, 1898, palpitation of the heart returned, and he feared the return of the impulse. On March 21st, 1898, frontal headache occurred with a slight impulse. Since March, 1898, he has gradually improved in general health, and has only been troubled by sleeplessness occasionally.

On admission to the asylum his heart showed nothing abnormal except frequency of beat, 90—100 per minute. The lungs showed evidence of slight consolidation in both apices, but more in the left than the right. At the present time he is not troubled by impulses. He sleeps well, feels strong, and is fat. The heart-beat continues frequent, 100—105 per minute. There is now no palpitation.

Though obsessions followed by impulses are experienced, I may say by everybody, at some period of time, impulses of a homicidal nature are so rare, and in this case are so clearly described by the sufferer, that I feel justified in mentioning so many details. This case seems at first sight to bear out the conclusion of Esquirol in his classical description of homicidal monomania, that there is a disease in which the patient presents no appreciable alteration in the intelligence or affections, and yet is prompted by an indefinable instinct to kill, and is carried along irresistibly to an act which is repugnant to his conscience ; and that this disease is announced by physical symptoms of which there is a perfect recollection : that the impulse occurs periodically, and is found in persons who, though noted for their gentleness and goodness, are at times depressed and gloomy.

The accompanying physical symptoms, although they resemble the aura of the epileptic, must not prevent us from distinguishing the homicidal act of the so-called homicidal monomaniac from the homicidal act of the epileptic in his dreamy automatic state. In the latter there is semi-unconsciousness and then loss of memory, while in the former there is a perfect recollection of details. From a medico-legal standpoint this disease or symptom of a disease is one of great importance, and perhaps the

careful study of its physical accompaniments may enable us to establish a distinction between the murderer and the monomaniac who commits homicide in response to his first impulse. Dr. Bevan Lewis, in the second edition of his work, in referring to the physical accompaniments states that they indicate a primary disturbance of the vagus. His words are, "The epigastric aura, followed by spasm of the throat and intense thirst, is of interest as indicating a primary disturbance of the vagus, and as giving rise to the most intense and massive feelings of organic life, which in the brute arouse the most ferocious instincts." In connection with this suggested disturbance of the vagus, the persistent frequency of the pulse mentioned above in the case of H. B— is of interest.

This case illustrates in two ways the views of Magnan, who holds that these obsessions and impulses are merely clinical manifestations of the mental state of the degenerate. In the first place there is ample evidence in this case of hereditary degeneration, which he maintains can be shown to be present in the great majority of cases; and in the second place we find that the obsession to murder was not the only obsession, for it was preceded by an obsession that his cattle were about to die, and the impulse to make the absurd remarks mentioned above.

(1) Read at the Spring meeting of the Irish Division, April, 1899.

Case of Porencephaly. By SAMUEL EDGERLEY, M.A., M.D., Senior Assistant Medical Officer, West Riding Asylum, Menston.

The following case of porencephaly may perhaps be considered worthy of note, not only on account of the large portion of brain directly involved, but also on account of the effects produced secondarily in other parts of the organ.

The subject's family history showed a marked hereditary predisposition to mental disease. Very little information could be obtained regarding her early life, but she was reported to have been mentally deficient and hemiplegic from infancy. Whether she then suffered from epileptic seizures is not known, but for fifteen years before her death, at the age of forty-three, these

had occurred, and, although not very frequent, had been severe and general.

She was under the writer's observation for only a few weeks before her death, which was due to peritonitis. During this time she was in very feeble health and unable to walk. She exhibited marked atrophy of the right arm and right leg. The arm was quite useless. The muscles were contracted, and there was firm flexion at the elbow, wrist, and finger-joints. The right lower limb was flexed at the knee-joint, the foot being in a condition of talipes equino-varus. Her sight appeared to be defective, but to what extent was not determined, her low state of intelligence being such as to preclude a proper estimate.

Post-mortem examination revealed the following:—The skull was fairly symmetrical, and the bone of moderate density. The dura mater was thickened, and on its removal there was found on the left side of the brain a large cyst containing a perfectly clear fluid. It extended from considerably in front of the position of the anterior limb of the Sylvian fissure to the posterior parietal convolution behind, and from the level of the upper part of the second frontal convolution above to the inferior temporal fissure below. Over this area the convolutions were entirely absent, the outer wall of the space being composed of brain membranes.

The arachnoid was opaque, and over rather more than the anterior half of the space was in close contact with the pia mater. In the posterior area the membranes were separated by fluid, a small second cyst being thus formed.

In the combined membrane were numerous blood-vessels, and several others were observed stretching across the larger space, unsupported in their course. In the posterior region, where the pia mater was separated from the arachnoid, vessels were observed spreading out in the former membrane.

The cavity was almost entirely separated from the left lateral ventricle by a translucent membrane about one sixteenth of an inch in thickness, which was found to consist of atrophied nerve tubules and increased neuroglia, and which was lined on the ventricular side by thickened ependyma. At the posterior extremity the cyst communicated with the ventricle by a foramen rather smaller than a sixpenny piece.

At one part the membrane of partition was thickened into a strand formed by nerve-fibres passing from the upper end of the

ascending frontal convolution downwards and external to the optic thalamus.

The basal ganglia were atrophied, this feature being more marked in the optic thalamus. The opposite cerebellar lobe (the right) was considerably reduced in size, doubtless due to degeneration of crossed connecting fibres passing between the base of the cerebrum and the cerebellum through the superior peduncles. Examination of the crura, pons, and medulla showed diminution of the pyramidal tract of the left side.

The first of the accompanying photographs shows the external aspect of the left cerebral hemisphere after the fluid had been allowed to escape, and the pia arachnoid removed, the relationship of the parts being, however, preserved. The blood-vessels are shown crossing the space, while in the background is the partition separating it from the lateral ventricle.

The second photograph, which gives an anterior view of the cerebrum, illustrates the difference in size between the two hemispheres after the cyst had been allowed to collapse.

Reference to Fig. 1 shows that the area involved closely corresponds to the distribution of the middle cerebral artery, and this appears to support the view that vascular occlusion is the cause of most of such cases.

Congenital Malformation of the Ear. By HUGH KERR, M.A., M.B., C.M.Glasg., Assist. Med. Officer, Bucks County Asylum.

THE patient who is the subject of this deformity is a female, single, æt. 25. She was admitted into the Bucks County Asylum on 23rd March, 1899, suffering from an attack of acute mania of one week's duration. She had been employed as a domestic servant in London, where she had to work very long hours. Three weeks before admission she returned to her home in Buckingham, and a week before being admitted she became acutely maniacal, noisy, and violent; was suicidal, and tried to jump through a window; had hallucinations of sight. One assigned cause of the attack was "over-work," another was well-marked hereditary predisposition to insanity. Her father's sister was an epileptic, and died insane in an asylum. Her



FIG. 1.

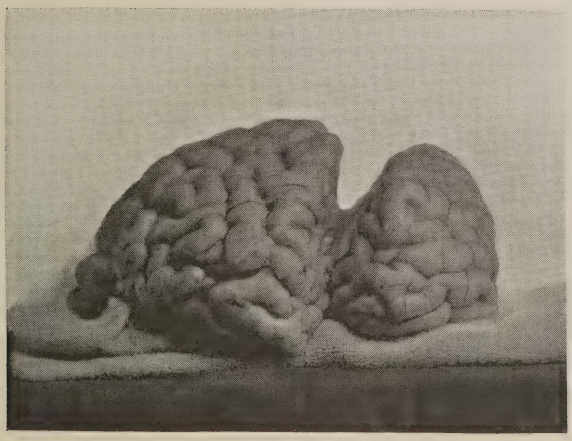


FIG. 2.

To illustrate Dr. EDGERLEY'S Case.

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grandfather (maternal) is at present a patient in this asylum, having been admitted in October, 1898, at the age of seventy-nine, suffering from senile dementia of a year's duration. The patient is the eldest of a family of seven, two sons and five daughters; none of these show any malformation, and are all in good health, bodily and mental.

The patient, on admission, was very excited, irrational, and somewhat incoherent; had delusions of persecution, that she was followed and would be injured, and visual hallucinations, saying she could see her father, who has been dead for some years. She was very restless, pulling out her hair, and at times very emotional, crying, &c.

Her bodily condition was fairly good, and there were no signs of organic disease. In the course of a few days she was free from excitement and more rational, although still confused in her ideas, emotional and readily upset.

On the 29th March she was feverish (temp. 101·8°) and had a bright red rash, involving the whole of the cutaneous surface, more marked on face and upper extremities; the conjunctivæ were congested, and she had some cough and bronchial catarrh. The rash had quite disappeared on the fifth day and the temperature and pulse were normal, the attack being evidently of the nature of "epidemic roseola." The source of the contagion was not traced. She was now quiet and rational, and so she continues, having apparently recovered her normal mental condition.



Left Ear.



Right Ear.

The interesting feature in her case is the existence of the congenital malformation of the right ear. The only parts of the external ear represented are the lobule, the tragus, and the antitragus. The lobule is about normal in size and appearance,

but has a forward tilt ; at its upper end it merges obliquely into the skin ; at the upper and anterior part a small piece of cartilage can be felt corresponding to the antitragus. The tragus itself is smaller than usual. The external auditory meatus is represented by a narrow opening or canal in the nature of a cul-de-sac, which just admits an ordinary probe for a distance of three eighths of an inch. The whole ear is freely moveable with the skin.

The left ear appears well formed, and with it she hears very well ; on the right side she is completely deaf.

The existence of various abnormalities and malformations of the ear in patients with congenital mental defect, and in cases of acquired insanity, has been frequently observed and noted. The present instance of arrested development is of peculiar interest, occurring as it does in a patient with pronounced insane heredity in both paternal and maternal lines, and who has herself, at the early age of twenty-five, become the subject of an attack of insanity.

Occasional Notes.

The Lunacy Bill.

THE Lunacy Bill of the present session has passed the House of Lords, and has now reached the Commons. It is practically the bill as amended last year, but with a varied pension clause, and a new clause for dealing with incipient unconfirmed insanity. The pensions clause in the present bill disappeared in its progress through the House of Lords, through the opposition principally emanating from the County Councils Association. The chief argument used was that these bodies object to be bound by Act of Parliament to give pensions. Another objection was based on the fact that in Yorkshire the county councils had decided not to give pensions, but had arranged to give larger pay ; although the increase cannot be regarded as at all adequate. The clause, however, was so unsatisfactory, providing only for a pension of one sixtieth, and even this practically dependent on the favourable report of the Asylums Committee, that only

gratification can be expressed that it has been withdrawn. Unfortunately the gratuity clause has shared the same fate without any apparent reason.

The early treatment clause in the bill embodies the recommendations made to the Lord Chancellor by the joint committee of the British Medical and the Medico-Psychological Association, reported in the April number of this JOURNAL. It passed unaltered through the House of Lords.

The "urgency order" clause is still retained, and fuller consideration of the probable effect of the reduction of the duration of the order to four days has resulted in a more strenuous objection on the medical side. This will probably manifest itself in the progress of the bill through the House of Commons.

There has been considerable delay already in the progress of the bill through the House of Commons, and it is still doubtful whether it will become an Act in the present session: if blocked it certainly will not do so.

The Magistrate in Lunacy.

It was not difficult to foresee that the Lunacy Act would entail disasters if magistrates were to assume the position of revising medical opinions in regard to mental disorder. That the magistrate might, in rare and difficult cases, require independent skilled opinion is readily conceivable; but that he should override medical certificates, presented in due form and sufficient in detail, by an autocratic use of his own unenlightened judgment is a peril accompanied by no extenuating circumstances.

It is reported that an inquest was held at Exeter on 1st April last, on the body of Susan Mary Herd, who had been found dead in bed in her lodgings four days previously. Her landlord stated that she had been melancholy and depressed, that she had not been outside the house for a year and a half, and that he considered her to have been of unsound mind. He wished to have her ejected because his wife was afraid of her. Dr. MacKeith said that he had certified S. M. Herd of unsound mind after careful examination, and taking into consideration that she had previously been in an asylum. She

was very despondent, and thought that people were trying to do her harm. Her room was in an unsatisfactory condition, and there was no fire. He had got the schedule for his certificate from the relieving officer. Mr. Perkins, M.R.C.S., stated that he had been called to find the deceased lying in bed dead. He had made a post-mortem examination, and arrived at the conclusion that she had swallowed an irritant poison.

The coroner in addressing the jury said that the deceased had apparently written numerous letters which bore evidence of having been composed by an insane person and one who was evidently an object for a lunatic asylum. He thought it a very serious thing for a magistrate to take upon himself in such a case to set his opinion in opposition to that of a medical man. The jury condemned the action taken by the magistrate, and returned a verdict of death from poisoning.

It will not be creditable if this matter remains in the unsatisfactory position in which it is left by the inquest. The public have a right to demand that protection which is endangered by the possibility of a recurrence of such a calamity. Mr. S. Jones, magistrate of the borough of Exeter, is not likely to repeat his fatal mistake in the future; but there are other magistrates just as capable of exerting ignorant authority, with results just as disastrous. They ought to be warned in time.

The Care of the Epileptic.

The advance in scientific knowledge and practical philanthropy which has been characteristic of the Victorian era causes us to scan with eager eyes what is being done in our department of medicine in foreign countries. We cannot afford to lag behind in administration, a domain in which English energy and common sense has been peculiarly successful. Dr. Lord has done well in presenting to the Association a graphic account of the later developments in caring for the epileptic, and in urging the claims of that unfortunate class on the attention of our local authorities.

Epilepsy, like general paralysis, is so marked in its manifestations that the crudest classification cannot fail to differentiate it

from other disorders of the nervous system. And just as Dr. Hyslop lately insisted on the divers kinds of general paralysis, so we must recognise and deal with the various classes of epileptics in such a manner as will, in so far as possible, benefit the sufferers and relieve the national obligations.

We are only too well aware of the extent of these obligations when we consider the vast aggregations of epileptic patients in the asylums of the country; and it cannot but be a question of great importance whether these could not be more satisfactorily dealt with in the light of recent experience. Dr. Lord has offered a suggestive classification of epileptics to aid in formulating plans for a revision and a reorganisation of our resources in this department, and the consideration of the problem might worthily occupy some time at the next annual meeting.

No doubt asylum care and control is necessary for many of the cases under treatment, but there might well be a relief of the pressure now experienced if suitable institutions for the exclusive accommodation of epileptics were provided. It is largely a question of the science and art of medicine, especially a question for those skilled in neurology and psychiatry. The work done at such establishments as Bielefeld and the Craig Colony has placed the fundamental principles on a sound basis, and the development of Chalfont proceeds in a most encouraging manner.

Those who are specially interested in this subject will find the report by Dr. Rhodes and Alderman MacDougall indispensable in arriving at a practical conclusion. Dr. Ireland has also published a short paper giving a *résumé* of the present position, and calling on Scotland to start on the same charitable path. It will be found in the *Scottish Medical and Surgical Journal* for May of this year.

The Medical Jurisprudence of Insanity.

An article on this subject in the *Law Magazine and Review* for May is well worthy the perusal of all interested in the subject. The article, founded on Dr. Clevenger's recent work, is an up-to-date statement of legal views on this matter. Abuse of the plaintiff's attorney is, perhaps, a little too evident

from the repeated allusions in a "very superior" style to the manner of expression and modes of reasoning of Maudsley, Ray, and other medical writers; and the special pleader also appears in the manner in which past exploded medical views are mixed up with more modern ones. The present legal attitude, on the contrary, is taken as the unchanging position of all time. In this there is as much unfairness as if a medical writer should describe the opinion of a certain judge, "that insanity only enhanced the crime," as the opinion of the whole legal profession. If the question of responsibility could be settled by quotations of contradictory, extravagant, or ill-considered expressions of opinion on the one side and on the other, it would by no means be certain that the learned judges would not be found to have surpassed the "sympathetic" alienist.

The question when is a man not to be punished on the ground of insanity, however, is only obscured by individual vagaries or professional prejudices, and it is quite time that views on this subject cease to be regarded as medical or legal, but solely from the standpoint of right and wrong.

The question of sanity or insanity necessarily precedes that of responsibility. In regard to this the *Law Magazine* says that "*the keen student of human nature*, not in its diseased but in its normal state, has a claim to be heard equal, if not superior, to that of specialists whose observations are entirely among the abnormal." The assumption that specialists have only had observation of the abnormal is about equivalent to asserting that a chemist who has specially studied gold-producing minerals has seen no others.

The keen observer of human nature, it may be presumed, is the ordinary juryman, for on him rests the ultimate decision of the question of sanity or insanity, and it may fairly be asked whether he is really as good as, if not better than the specialist on insanity. To those acquainted with insanity the question is too obviously absurd to need debate.

The keen observer's power is practically discredited by the fact that year after year numbers of persons have been tried by judge and jury, condemned and sent to prison whilst insane and for acts which were the outcome of insanity. Moreover, every year persons are condemned to be hanged, who are afterwards reprieved on the ground of insanity and sent to Broad-

moor on the reports of alienists. How is it that the judges and juries on these cases have overlooked the mental state, if these keen observers are more to be trusted than the alienist? and why is the alienist called in to rectify the injustice?

The writer again implies that "authors such as Dr. Clevenger" ignore the true object of legal punishment, which is the safety and security of society. This, however, is not in accordance with fact; the medical profession is constantly urging on the Legislature the means of protecting society from dangerous lunatics, unfortunately not with complete success. The medical profession, however, whilst thus desirous of protecting society, sees also the justice of protecting the individual against unguarded social instincts in the mass.

The legal profession, in its eagerness to secure the safety of society, tends to forget the rights of the individual. This is seen not only in the views that have been upheld in regard to the criminal insane, but still more markedly in the legal procedure interfering with the liberty of the sick insane in obtaining treatment.

We have no intention of here discussing the whole question of responsibility, but only desire to draw attention to one or two of the fallacies contained in this article, and to deprecate that kind of professional prejudice which is so great a bar to progress in the satisfactory solution of the important problem of criminal responsibility.

The Inoperative Inebriates Act.

The want of homes for the purposes of this Act was pointed out by us in our notes on this legislation last year. Unfortunately no one has been compelled to make such provision, and the Act practically remains a dead letter.

Magistrates have again and again desired to commit inebriates under the Act, but have been unable to do so. Three cases were remanded in one week at the North London Police Court only, so that the number requiring care must be very considerable.

The London County Council has had a special committee

meeting on the subject, but as yet nothing definite has been decided.

The onus of making the necessary provision of homes will almost inevitably fall on the County Councils, since the subsidy of ten shillings and sixpence per week provided from Government sources is apparently not enough to stimulate charitable effort in this direction.

Only three homes at present exist. The Victoria Home, near Bristol, accommodates about sixty persons, but when completed it will have room for several hundreds. The St. Joseph's Home at Ashford, Middlesex, is reserved for Roman Catholics only. The third is at Duxhurst, where Lady Henry Somerset has given up a small portion of her industrial homes: this, however, is not as yet available, the regulations of the Home Office not having been complied with. Practically, therefore, the provision is almost *nil*.

Considerable time must necessarily elapse before the County Councils, even at their most rapid rate of procedure, can organise homes, if, indeed, they undertake the duty, and do not leave to the Government the task of meeting the necessity arising from this legislation. Probably some of the Members of Parliament who were active in support of the new Act will not be content to let it remain a dead letter. Up to the present time, however, the London County Council has the credit of having at least considered what is best to be done, and we must patiently await the action that may result from that consideration.

The Brabazon Scheme in Asylums.

We publish in this number an account of the introduction for the first time of the Brabazon scheme into an asylum for the insane. For information upon the nature and aim of this enterprise we need only refer our readers to the article in question. Hitherto the scheme has been in working in workhouses and infirmaries only, but the Brabazon ladies are evidently prepared to carry their enterprise into the more difficult sphere of asylums. In order to attain the realisation of the conception from which this scheme originates, we require idle people,

without initiative, or with undeveloped ability (though it may be limited ability) to work; raw material to be done up into fancy articles, and the money to purchase the same; teachers, able, free, and willing to teach, and to entertain also. Now the class of individual required is common in most asylums, though in point of tractability he or she compares ill with the relatively docile *clientèle* hitherto attached by the Brabazon ladies. A grant of money to purchase material for the work in contemplation would probably be obtained from most asylum committees, especially as it would at any rate be in some measure repaid by the sale of articles produced.

An average asylum will supply the first two requisites for the successful working of the scheme in question, but the third requirement it could not supply; and the failure of the institution is the opportunity of such a society as the Brabazon. In certain hospitals for the insane, and in private asylums, ladies have been, and still are, employed as nurses; but although this plan has the merit of introducing a refining influence, it is not the same thing at all as that under consideration: they have not the time, nor are they all specially qualified to teach some particular kind of work, as are the ladies of a Brabazon committee. Provided the work be carried on with the sympathy and accord of the asylum officials, as doubtless it would be, we see no objection to the Brabazon scheme in these institutions. At any rate, for our pauper asylums the plan would appear to be well worthy of an extended trial.

We are informed that this scheme has been at work in one of the Irish asylums for about six months, and has worked very well indeed. The superintendent does not regard it as a substitute for ordinary industrial work, but as a useful supplement. To some degree he thinks that it aids in maintaining or resuscitating the æsthetic faculties which are apt to rust in asylums, and he reports that he has found distinct benefit from the patients being brought into pleasant contact with kindly and interested persons outside. Perhaps the education of such persons in what can be done by and for the insane is also an advantage.

Lugaro's Theories of Cerebral Activity and Sleep.

The impregnation methods of Golgi, with their various modifications, have been the basis of valuable work in the field of cerebral histology, and if the recent work of Lugaro—of which an account was given in the Italian Retrospect of the April number of the JOURNAL—is confirmed, neurological science will be indebted to these methods in a very much greater degree. Lugaro experimented with a view to fixing the cortical nerve-cells in whatever functional state they happened to be, and ultimately adopted the method of injecting the carotid artery of the living animal with Cox's solution, the fluid employed in a well-known modification of Golgi's sublimate method. This produces instantaneous death and an immediate fixation; the sublimate impregnation is afterwards completed by prolonged immersion in that fluid. The experiments were made upon dogs, some of which were normal, others under the influence of chloroform, ether, morphine, or chloral. As a result of his work Lugaro maintains that there is a functional plasticity in nerve-cells, limited to their extreme appendages; to the gemmulæ of the protoplasmic processes and the terminal arborisations of the axis-cylinder process; that there occur in these terminal parts short movements of propulsion and retraction sufficient to establish and break contact. Upon this basis of retraction and expansion of the gemmulæ or spinous appendages, occurring throughout the brain to an inconceivable extent, Lugaro constructs a theory of consciousness and cerebral activity. The state of expansion permits the reception by the nerve-cell of impressions; that of retraction connotes the interruption of the great majority of possible connections—whereby the access of fresh stimuli is impeded—and permits the fixation of the attention upon a particular set of ideas, with the elaboration of these, and the logical sequence of ideas. Sleep, according to Lugaro, is associated with a general expansion of the gemmulæ; their movements become more torpid as the result of the action of fatigue-products and from a lack of stimulation; their retraction, upon which depend attention-power and psychical activity, is imperfect; and finally it ceases to occur.

That such an important *rôle* should now be ascribed to the gemmulæ which stud the dendrites of nerve-cells is not a little curious, when one reflects that but a few years since great doubt

was expressed as to whether these buds were actually present in the living state, or were merely the outcome of histological technique.

It has not been shown that all dendrites possess the knob-like enlargements in question.

Much has been written upon the supposed "amœboidism" and "plasticity" of the nerve-cell; and the latter has been likened to an "octopus," capable of throwing out and of retracting its "tentacles." If authors with theories as to the physical basis of psychical activity and sleep have invented these conditions in support of their preconceived views, theirs is a method than which nothing is more reprehensible in science. Lugaro's views are, at any rate, based upon some experimental evidence. He expresses himself as entirely opposed to the theory of amœboid movement (in the strict sense) of nerve-cells.

Further observations upon this theory of make-and-break contact, with the terminal organs of the nerve-cells as the apparatus concerned, will be looked for with great interest, amongst others by workers in the pathology of mental disease. The theory, as will be seen, is entirely dependent upon the neuron doctrine. Whether this is a sure foundation upon which to build may be doubted, in connection with Apáthy's recent work, which was commented upon in the April number of the JOURNAL. Lugaro's suggestions also presuppose the predominance of the nerve-cell amongst the cortical elements; stimuli arrive by the various connections at the nerve-cell, and are elaborated in the latter. It is as well to remember, as Sir William Gowers has recently observed, that all we know for certain about the nerve-cell is that on it depends the vitality of the nerve-fibres. As to higher functions nothing is known.

Part II.—Reviews.

Proceedings of the American Medico-Psychological Association at the Fifty-third Annual Meeting, held in Baltimore, May 11th—14th, 1897 (published by the Association).

THIS bulky volume of some 380 pages contains the proceedings, papers, and discussions of our sister association in America at its fifty-

third annual meeting, held in May, 1897. The Medico-Psychological Association of this country can claim to be some three years older than the corresponding association in America. The latter was founded in 1844, and until 1892 was known as the Association of Medical Superintendents of American Institutions for the Insane. In 1891 its membership had increased to more than two hundred, and in 1892 the present constitution and bye-laws were adopted, and the name changed to the one it now bears. It has now reached a membership of some 328, of which fourteen are honorary, and appears to be in a flourishing condition, judging from the number of papers of interest read at its annual meeting, and by the fact that it has a balance in its favour of, roughly, $465, the expenditure during the year 1896—7 being less than the income by some $150.

The arrangement of the subject-matter in this volume is as follows:—The first part gives the officers for the years 1896—7—8, a list of members, the geographical distribution of members and institutes, and the constitution and bye-laws of the association. This is followed by a general report of the proceedings (including discussions) at the meeting. The rest of the volume comprises the papers and addresses mentioned in the proceedings.

The proceedings were opened by the State Governor, who cordially welcomed the members to Maryland, and were characterised throughout by an earnestness and enthusiasm truly American. The opening and concluding words of the State Governor's welcome are so typical of this spirit as to merit quotation:

"Marylanders are happy when welcoming strangers to their State, and entertaining them within the portals of their own homes. They are kind to profusion and spare no pains to please. It gives me pleasure to extend the right hand of fellowship to you, gentlemen, who are the managers and directors of those 'houses of grace,' which help to make life bearable to those suffering from the darkness of affliction.

"I again welcome you, gentlemen, to this State, and hope that your stay may be pleasant and agreeable. To you are entrusted the lives and happiness of many people.

"'The sweetest blessings falling from above
Are human sympathy and human love.'

"One strengthens hope by stimulating cheer; the other softens sorrow with its tears, and together they form the golden rim that spans the borders of eternity."

The Presidential Address was delivered by Dr. T. O. Powell, who sketched the progress of psychiatry in the Southern States. This theme was suggested by a committee of the association, and was very appropriate, seeing that the meeting at which it was delivered was held in the southern metropolis. The task before the speaker was to describe the rise and progress of a vast system of charities in the fifteen commonwealths of the south. In doing so he found a difficulty, within the narrow compass of an address, in doing justice to a subject at once so vast in extent, so fertile in material, and so full of tender memories of self-sacrificing men and women. After briefly indicating the sources of his information, he went on to describe the influence of Miss Dix, of whom America is justly proud; the records of whose achievements in the annals of charity find no parallel in the nineteenth

century save only John Howard. Since 1845, when she commenced her self-appointed mission, her influence has been felt in every Southern State. Upon finding, by her own laborious inquiries, that an asylum was needed in any community, she marshalled her facts so pathetically and forcibly that they appealed to the most indifferent. Though sometimes at first unsuccessful, she was indefatigable in fulfilling her holy mission, and in the end always won. To her personal influence was due the establishment or development of hospitals for the insane in ten Southern States. The results of such victories of peace would throughout all times be felt in the remotest hamlets. This latter-day saint lay buried in the beautiful cemetery at Mount Auburn, near Boston; but if we sought her monument, then must we visit the noble edifices for the insane in every State. Before entering upon the history of individual institutes Dr. Powell took a survey of the whole field. At the close of the last century there were but five public asylums in England, and one public and three corporate asylums in the United States, and it was well to remember that no community, American or foreign, could point with absolute pride to its history in the care of the insane. The proudest and wealthiest States have reason to bow with shame for the errors and failures of duty to the mentally afflicted. For convenience he divided the subject into periods.

First period.—In colonial days the methods were necessarily primitive. Ideas of demoniacal possession held sway. The insane were chained in strongly constructed houses. The prevailing conception was to protect the sane, and the insane were therefore neglected.

Second period.—About the time of the revolutionary war evidences of a better spirit appeared; the insane were placed in almshouses, and passed under the jurisdiction of the Commissioners of the Poor. Laymen had official charge of both paupers and insane. Sometimes the insane were assigned to wards and outhouses of general hospitals. The common designation of these receptacles was "madhouse," and their inmates were held in great contempt. Little was done in the way of medical treatment, and the patients were in charge of brutal keepers. In other cases they were boarded out in private families.

Third period.—In the third decade of the century asylums for the insane were founded. The usefulness of the asylum at Williamsburg, which was first to be established (1769), had long been demonstrated, and its fame had spread abroad. These institutions were built in large towns, and were massive structures. They admitted not only the insane, but idiots and epileptics. Only the most violent were committed, and the asylums were under the charge of lay superintendents. Physicians paid visits as the superintendents thought it necessary. The prevailing ideas were altogether custodial; restraint was common, and violent methods of repression were in vogue—shower-baths, tranquillising chairs, bleeding, vomiting, &c. The Legislature aimed at making the asylums self-supporting; they erected the buildings, but the County Commissioners of the Poor were expected to pay for the support of their paupers.

Fourth period.—About 1830, lay superintendents began to give place to "resident physicians" or "medical superintendents." Re-

straint was modified, and curative treatment began, although the custodial idea was not abandoned.

Fifth period.—The decade following 1850 was one of great activity. At the beginning of this period American asylums were said to lead the world. In 1860 the only Southern States not provided with asylums were Florida and Arkansas.

Dr. Powell went on from here to give the individual history of the various States and their institutions for the insane, the reading of which is not only interesting but instructive. Later he dealt with the coloured insane. Provision for this class had always been a separate and peculiar problem. Before the war there were comparatively few insane negroes. Since emancipation the number had increased, and was now alarmingly large and on the increase. The problem arose of how to provide for a class emerging from servitude, of different race, habits, instincts, and training. Prior to the civil war some asylums received the coloured insane, but the accommodation was not adequate, even considering their small number. On their emancipation they became subject to the same penalties that other races have paid for liberty, licence and intemperance. In 1850 the proportion of white insane to black was 5 to 1, in 1870 it was 3 to 1, in 1890 2 to 1. It was unanimously conceded that the separation of these two classes was to the advantage of both. Consequently in most southern asylums there were four departments. Virginia and South Carolina had entirely separate hospitals, and to the former belonged the credit of having established the first asylum for the poor coloured man. It was to be regretted that not only was insanity on the increase in this class of the population, but also tuberculosis, the latter especially in the female portion. In this country we have to be thankful that we have no racial question to complicate our lunacy problems.

Many of the papers read at this meeting were of extreme interest, but space prevents anything more than mere mention. Dr. Clarke took up the question of Auto-infection, advocating it as a cause of certain forms of insanity. No doubt this is a wide field for research, especially in alternating and circular insanities, but care must be taken to distinguish the products of a faulty brain chemistry, and not to assume them to be the cause of the insanity. Dr. Hurd followed with a paper on the clinical aspects of the same subject. An important paper was that of Dr. Meyers, who showed the various types of changes in the giant-cells of the cortex. This is illustrated by coloured plates. The development of the higher brain centres was dealt with by Dr. Paton in a very original manner, and is a paper worthy of note. Dr. Richardson traced the genesis of a delusion which will always be a fascinating study to the alienist. Equally interesting was the paper of Dr. Worcester on the psychology of insane delusions. A paper of great merit was that of Drs. Peterson and Langdon on Katatonia. Not only did they report four cases of this undoubtedly rare disorder, but also gave a digest of practically all that has been written on the subject, together with a complete bibliography. They came to the conclusion that katatonia was not a distinct form of insanity, that it had no true cyclical character, that it was simply a form of melancholia with cataleptic symptoms, verbigerations, and

rhythmical movements. They condemned the name katatonia, and were of the opinion that "katatonic melancholia" was the term best applied to this symptom-complex.

This by no means exhausts the papers of interest, and in conclusion we must congratulate the Medico-Psychological Association on the success of its annual meeting, and recommend the perusal of this volume to our readers.

Psychologie de l'Instinct sexuel. Par le Dr. JOANNY ROUX. Paris: Baillière, 1899, pp. 96, price 1·50 fr.

This little volume, which appears in the useful series of *Actualités médicales*, and is written by an assistant medical officer in the Lyons Asylum, has an importance out of proportion to its size. It is not only a very condensed statement and thoughtful discussion of the main points in normal sexual psychology; its chief significance lies in the fact that here, for the first time in a series of general medical handbooks, it has been found possible and desirable to include a study of the sexual instinct. It can scarcely be said that Dr. Roux's scientific equipment, and knowledge of the now enormous literature of his subject, are adequate to the task he has undertaken. But at least he approaches the question in a thoroughly scientific manner, and his tone is excellent. When a French writer deals with sexual questions, even from the medical standpoint, there is a temptation to allow the *esprit gaulois* to intrude, and to produce a certain levity. Dr. Roux, with a few lapses, fairly succeeds in holding this Gallic tendency in check; and even if his little book were less well done than it is, he would thus have helped forward the study of the subject he deals with.

The first point discussed is the organic peripheral basis of the sexual instinct. After considering the normal phenomena of sexual development, and the results of castration in animals, men, and women, together with the influence of the menopause, the author decides that while the sensations arising from the genital organs are of the highest importance in the normal evolution of the sexual instinct, they are not indispensable for its appearances; that there is something else in the sexual need besides the cry of an organ to function, or the craving of seminal vesicles to be emptied. What is that something else? The root of the sexual impulses, the author answers, lies in the deepest parts of our organism; we love with our whole body; the source of sexual desire is to be found in the anatomical elements of the body, and sexual *hunger* is to be distinguished from sexual *appetite*, the latter alone being a definite and conscious impulse. The author does not accept the theory of Brown-Séquard, that internal secretions play a part in constituting the sexual impulse. In the same way he criticises and rejects the various attempts to localise a sexual centre in the brain. The phenomena of sexuality, he points out, are really cortical reflexes. We only have to ascertain at what point the centripetal part of the reflex enters the cortex, and at what point the

centrifugal part emerges; the general point of arrival he places where Flechsig places that of the nerves of general sensibility, at the Rolandic convolutions.

Having reached the cortex, the nervous impression determines in the first place a conscious sensation, in the second place a series of intra-cortical associations. The way is thus opened to a discussion of the sexual emotions as well as of the part played by the various sensations—visual, auditory, tactile, olfactory—in the constitution of the sexual impulse, the consideration of pathological aberrations being throughout excluded. The concluding sections deal with sexual choice (briefly traced from the infusorians upwards), chastity, modesty, &c. The author writes so concisely throughout that it is impossible to summarise his discussions of the various points that arise. On the whole, this little book may be commended to those who desire a brief and readable, if perhaps somewhat superficial account of the present state of knowledge and opinion in the field of normal sexual psychology.

The Sexual Instinct and its Morbid Manifestations from the Double Standpoint of Jurisprudence and Psychiatry. By B. Tarnowsky. Translated by W. C. Costello, Ph.D., and Alfred Allinson, M.A. Paris: Carrington, 1898, pp. 239, price 7*s.* 6*d.*

This work, which first appeared in Russian in 1885, and immediately afterwards in German, was one of the earliest attempts to deal in a comparatively scientific manner with perversions of the sexual instinct. Inspired by the humane instincts of his race, Professor Tarnowsky was one of those who first effectively demonstrated that pederasty is not merely the result of insatiable licentiousness, nor, as Tardieu and other medico-legists had hitherto usually assumed, a mere matter for local physical investigation, but that it is frequently a condition in which congenital taint and mental disorder are important factors. Vice, he concluded, is in its most violent manifestations the symptom of a morbid state, exhibiting a certain deadening of the feelings, with an imperfect equilibrium of the nervous system, favouring the development of pronounced mental disease and weakness of intellect; and he pleaded, with Michelet, that jurisprudence must become a medical science, based on physiological facts.

But our knowledge has progressed considerably in the brief interval of fifteen years that has elapsed since Tarnowsky wrote. The larger public may remain unconvinced, but to the small circle to whom such books are alone properly addressed this work now seems somewhat vague, crude, and old-fashioned. It cannot for a moment be compared with so admirable a treatise as Moll's. We may admit that it once played an important historical part in bringing the aberrations of the sexual instinct into the sphere of medical science; we can by no means accept it as an adequate modern text-book.

The publisher and the translators have sought to do their best for

the book. It appears to be well translated, and the volume is excellently produced. The author, whose portrait forms the frontispiece, furnishes a preface for the English edition, and states that his views remain unchanged.

Psychiatrie: ein Lehrbuch für Studirende und Aerzte (*Psychiatry: a Manual for Students and Physicians*). Von Dr. Emil. Kraepelin, Professor an der Universität, Heidelberg. Leipzig: Barth, 1899, 2 vols. Price, vol. i, 9 marks; vol. ii, 15 marks.

When the critic notes that he has to do with the sixth edition of a book like this he feels that his work is forestalled. It is his immemorial office to find faults; but what faults is he likely to find in a text-book so often trimmed and amended, and found acceptable to a learned public fond of thorough-going information? Let us therefore consider the plan of a book which has met with an appreciation so imposing. It is made up of two volumes, the first of which is given to general psychiatry. Here the author deals with the causes of insanity, first corporeal, then psychical, and then general, such as race, time of life, national character, climate, and social position. After this Dr. Kraepelin deals with the different derangements of the mind, how each of the sensory and mental faculties is affected in insanity. He omits to mention how the musical capacity is affected. The author then treats of the course, duration, and issues of insanity, its diagnosis and treatment, and finishes with a chapter of twelve pages upon the asylum for the insane. In many text-books in English we have a chapter on the laws dealing with the insane, and this is not the least useful part of the books. We should be interested in learning how lunacy legislation stands in Germany. We suppose there are different laws in the different states of the Fatherland, which would make such an exposition long and difficult. This may have deterred the Professor from attempting it. In the opening volume the author treats of general psychiatry in a learned, comprehensive, and philosophical manner. He is always open-minded, and is ready to direct our attention to points which require farther investigation.

In the second volume, which is well-nigh double the size of the other, Dr. Kraepelin describes the different clinical groups of mental disease. He begins with—

1. Insanity of infection, which he subdivides into febrile delirium, the initial delirium of smallpox, typhus, and hydrophobia; and thirdly, states of mental weakness supervening after the general symptoms of the infectious disease have gone. Such derangements are sometimes observed to follow typhus, cholera, and malarious fever. Under this section he includes the polyneuritic insanity described by Korsakow. This chapter has been re-written for the present edition.

2. Then follows insanity from constitutional exhaustion, or from overstrain of the nervous system, following severe study or other

exertion. Under this section Kraepelin includes Meynert's amentia, which he restricts to narrower limits. He has also an excellent description of neurasthenia.

3. Toxic insanity from alcohol, opium, cocaine, &c. In the first volume the author has already considered ergotism, pellagra, insanity from lead and other mineral poisons.

4. Thyreogenous insanity, which comprises myxœdema and cretinism.

5. Dementia præcox, of which there is a hebephrenic and a katatonic form.

6. General paralysis.

7. Insanity from brain diseases. This includes quite a pathological museum of lesions—gliosis, sclerosis, lues hereditaria tarda, cerebral tumours, hæmorrhages, and blows on the head.

8. Insanity of retrogression, which includes melancholia and senile insanity. The Professor interposes a middle form of premature senility, in which elderly gentlemen take to flirtations with any young women, and show senseless jealousy of their own wives.

9. Maniacal depressive insanity.

10. Paranoia.

11. General neuroses, epileptic and hysterical insanities.

12. Psychopathic conditions, insanity of degeneration, including dominant ideas, agoraphobia, kleptomania, and other phobias and manias, and deranged sexual feelings.

13. Arrests of mental development, idiocy, and imbecility.

It were easy to make objections to this classification, of which some of the forms are founded upon ætiology, others on pathology, others on clinical or psychological symptoms. Nevertheless Dr. Kraepelin, who is a good clinical observer, makes it the groundwork of an instructive series of generalisations, not too difficult to grasp. Great pains are taken to lay down the differential diagnosis of the various forms. One merit of his work is that he gives us studies of the slighter and less pronounced forms of mental perversion, which do not often come to the notice of the physicians of asylums. These are interesting in themselves, and useful towards the understanding of graver alienations.

In support of the now generally admitted opinion that syphilis is the most important factor in the causation of general paralysis, Dr. Kraepelin mentions that a physician known to Krafft-Ebing had inoculated nine general paralytics in whom no traces of previous luetic infection could be found. In none of the cases did any secondary symptoms appear. The inference was that these patients must have already had constitutional syphilis. He also cites the case of five men who were all infected with lues from the same source, and who all became general paralytics. The poison of paralysis, he says, must circulate in the blood. This explains the extensive alterations in the blood-vessels. Only, he observes, these lesions vary in extent in different cases, and we may meet with a much greater amount of alterations in the blood-vessels of the brain without the symptoms of general paralysis. Kraepelin thinks that this disease consists in a general injury of nutrition, which implicates the brain more than any

other part of the organism. He thinks that the vessels are first affected, then the ganglion-cells and the grey net in the cortex, after which there is a decay in the axial fibre, and a degeneration of the neuroglia.

He gives us Homen's description of *lues hereditaria tarda*, which bears a resemblance to the demented form of paralysis. It begins in early years with giddiness, headaches, unsteady gait, and advancing diminution of intelligence. This is followed by slowness and difficulty of speech, tremors, and sometimes convulsions, while the mental hebetude goes on to dementia; death follows after some years. The principal lesions found on examination are extensive endoarteritis, disappearance of the nerve-fibres, especially in the temporal region, less marked alterations in the pyramidal cells, and slight degeneration of the neuroglia.

The book is well illustrated by diagrams and specimens of the handwriting of the insane in the text, and with eleven pages of zincographs giving reproductions of microscopic preparations, mostly contributed by Dr. Nissl, and by groups of individuals exhibiting the various vesaniæ. We are unable to say whether Dr. Kraepelin's book bears the palm over the other fourteen treatises on insanity which are in circulation in German-speaking lands; but we can confidently recommend the work to those who wish to know the latest observations and researches in German psychiatric medicine.

Arbeiten aus dem Gesammtgebiet der Psychiatrie und Neuropathologie (*Studies from the Field of Psychiatry and Neuropathology*). Von R. v. Krafft-Ebing. 3 Heft, Leipzig, 1898, 8vo, pp. 245. Price 4 marks 50 pf.

This is the third volume of a series of cases met with in the practice of Dr. Krafft-Ebing. To anyone who knows the great opportunities for observation enjoyed by this distinguished physician it will be needless to say that the cases are curious and interesting. The first two papers treat of the ætiology of paralysis agitans. We have then a series of papers upon transitory delusions and dreamy mental conditions often observed in epileptics, but which the author shows may occur in patients affected by neurasthenia, hysteria, and excess in alcohol. The next chapter is on typical delirium in epileptics. Out of thirty-eight cases studied he found great religious exaltation in twenty-eight, often of a distressing character; the patients thought they had struggled with the powers of hell, and had fears of damnation or of martyrdom. Krafft-Ebing did not find that the religiosity could be traced to brooding over their unhappy disease, as some authors have stated. Sexual excitement was found in seventeen out of the thirty-eight cases. There is another paper, filling thirty-six pages, upon epileptic psychoses.

The author collects together a number of cases of retrograde amnesia. The loss of memory generally followed hysterical attacks,

fright, or other mental disturbances. Krafft-Ebing observes that the cases of amnesia under his observation were accompanied by general anæsthesia. A number of cases have been collected in which, after a fall or blow upon the head, the patient lost the memory of events dating some time back from the accident. These were not accompanied by general anæsthesia. He treats of ecmnesia, by which term is understood some singular cases in which the memory goes backwards to an earlier period of age, all subsequent events being forgotten. For example, in the first one published by Blanc-Fontenille the patient, an hysterical woman thirty-two years old, had her memory carried back to a time when she was seven years of age, when tracheotomy was performed on account of croup. She was said even to reproduce or imagine that she experienced the fresh sensations following the operation. Krafft-Ebing brings his authority to support these statements, which were received with incredulity in Germany. He adds two instances from his own experience. One, a girl of seventeen, came from a family of jugglers (Jongleur Familie), and had wandered about a good deal in her childhood. After an hysterical attack she was subjected to hypnotic treatment. On awakening she found herself thrown back into the memory and mental condition of her tenth year, thought she was in Russia, was astonished at the scar of a burn which she had got when twelve years old, and did not know how she had got a ring on her finger, presented to her when she was thirteen. Her writing was said to have the unformed character of her childish days. We have read over the chapter on the surgical treatment of epilepsy in the hope of gaining some light, but the learned physician evidently considers that the indications which could justify opening of the cranium are very rare. He does not even regard the presence of a localised injury as affording a sufficient indication, for he thinks it more probable that the general commotion of the brain would be the exciting cause of the epilepsy. He gives three cases of surgical treatment of epilepsy met with in his clinique, but none of them of a character to encourage repetition. In the last pages of the book the author describes a patient aged nineteen who suffered from hysterical symptoms of a grave character. Extirpation of the left ovary was performed, and this was followed by improvement, but the symptoms returned. Extirpation of the remaining ovary, which was found to be little diseased, was then tried. This was followed by permanent recovery.

Beiträge zur Physiologie des Centralnervens Systems. Von Max Verworn, M.D., Professor der Physiologie an der Universität, Jena. *Erster Theil: Die sogenannte Hypnose der Thiere* (*Contributions to the Physiology of the Central Nervous System.* First part: *The So-called Hypnotism of Animals*). Royal 8vo, pp. 92, Jena, 1898. Price 2 marks 50 pf.

It has been for centuries known to the curious that some animals, kept for a few instants in abnormal positions, remain for some time

after in a passive and motionless state. The well-known experiment of the hen lying prostrate upon the table with its beak upon a chalk line is described by Daniel Schwenter, Professor in the University of Altdorf, in his *Deliciæ Physico-mathematicæ*, Nuremberg, 1636; and ten years later Father Athanasius Kircher again gave an account of the experiment, with a woodcut, which is reproduced in Verworn's book. The author gives in detail a number of experiments made to study this condition upon birds, guinea-pigs, serpents, and frogs. His elaborate experiments are illustrated by eighteen engravings in the text. The author reviews the various explanations which have been made. A favourite one is to attribute the phenomena to "animal hypnotism."

Dr. Verworn observes that to understand this condition one ought to pay attention to the habitual attitude of the animal and the state of its muscular system. The body always has for certain positions a characteristic manner of holding itself, and there are reflexes which serve to bring it back from unusual positions to the normal attitude. This reflex being accomplished, the muscles have a tendency to remain in a state of tonic contraction. When the animal rises up it is not through a relaxation of this muscular tone, but from a renewed impulse to contraction, either spontaneously or arising from an outward stimulus. This characteristic complication of symptoms is observed even when the cerebrum of the animal is removed. In this respect the behaviour of the uninjured and of the brainless animal is quite the same. In the uninjured animal the brain remains passive during the adjustments of the correctional movements of position. There are two components in this condition. The main one is the tonic excitation of the cerebral reflexes regulating position. A subordinate one is the inactivity of the motor spheres of the cortex, which in the end spontaneously give an impulse to make the animal arise. This is accompanied by quickened breathing and quickened heart-beat. This component has no immediate connection with the other, the tonic excitation of the reflex regulating position. It is nothing else than the inhibition of voluntary movements or actions, which we observe every day when we receive a strong impression from the senses.

These phenomena have nothing to do with hypnotism in human beings, which is entirely the product of suggestion. The only thing in common is that in both conditions there are processes of inhibition; but every process of inhibition cannot be described as an hypnotic state. We hope to see more of the Professor's thoughtful and elaborate studies in physiology.

The Collecting of Anthropometric Data.

Anthropometry is a branch of scientific investigation which, we must acknowledge, has been neglected in this country in the past, and one in which we have allowed ourselves to be outstripped by various

Continental nations and America. Happily there are now signs of awaking activity evinced by the establishment of some of our universities and colleges of Anthropometric Laboratories, and also by the publication of various papers dealing with the subject from both practical and theoretical aspects.

There has grown within recent years in asylums a spirit of greater activity as regards the duty owing to contemporary science. This has resulted in the establishment at many asylums of Pathological Laboratories, an advance which, it is hoped, will be followed by the addition of laboratories for the prosecution of psycho-physical and anthropometric research. As regards these, foreign countries are much in advance of us, although we may be ahead of them in the care and treatment of the insane. There are many difficulties in connection with the establishment of Anthropometric Laboratories. In the first place, the importance and necessity of the work does not seem to have been fully grasped; and in the second place, the intrinsic nature of the work requires a more than usual amount of application, patience, and time, and many years of steady labour will have to elapse before any results can be published. This latter consideration is of great importance in choosing a scheme to work to. It is not within the power of any one individual working alone to supply all the statistics required, and a scheme which will secure general adoption is desirable, so as to secure uniform results, and to render possible the collation of the labours of many observers. Many schemes have been published, but none of them can be said to be entirely satisfactory. It is evident that a scheme comprising the various methods adopted in the examination of individual parts would be too cumbersome and take up too much time. The measurements need to be selected with great care so as to exclude those unimportant, and to secure only those which have proved to be of value. For this purpose the individual parts require to be more thoroughly reported upon. The face, cranium, ear, palate, have already received considerable attention. The drawing up of a general scheme would be most satisfactorily accomplished by a conference of representative workers, but more work will have to be done and more experience gathered before such a conference could be called together with advantage.

We have been favoured with the perusal of a provisional scheme used by Professor Reid, of Aberdeen, in his laboratory. It will readily be understood by the foregoing remarks that its adoption at the present juncture cannot be as yet generally recommended. It is designed, of course, to collect normal rather than stigmatous data. One good point in the scheme is that it provides for the observation of the same datum on six separate occasions.

Normal anthropometric data are required before the data collected in asylums can be valued. There would appear to be an excellent opportunity of securing the former at the University laboratories, especially as regards the male sex.

In securing normal data it is important to remember that it is absolutely necessary to carefully inquire into the family and personal history, and as far as possible to follow the subsequent history. Before any conclusions can be come to with any degree of certainty

we, as specialists, require four groups of data. These are with regard to—

1. Male and female insane with heredity.
2. Male and female insane without heredity.
3. Male and female sane with heredity.
4. Male and female sane without heredity.

Allied spheres of investigation are those with regard to the criminal, neurotic, epileptic, and certain classes of paupers and vagrants. These should be rigorously excluded in gathering normal data.

Blood-pressure in the Insane. By MAURICE CRAIG, M.A., M.D.Cantab., M.R.C.P.Lond. (*Lancet*, June 25th, 1898.)

In this paper the author records the results of a series of sphygmometric observations which he has made upon a number of insane patients at Bethlem Royal Hospital, and discusses some of the many interesting questions which these results suggest. He appears to have established several facts of considerable clinical and pathological importance, and his thoughtful and guarded interpretation of their significance leaves little room for criticism. We can scarcely give a better idea of this important piece of work than by reproducing (in a slightly abbreviated form) the summary of his observations with which the author concludes his paper:—1. The blood-pressure varies in different forms of insanity. 2. It is raised in persons who are depressed or who are suffering from melancholia. 3. It gives varied results in persons suffering from melancholia with motor excitement—so-called agitated melancholia. 4. It is found to be normal upon the recovery of a patient whose blood-pressure has been raised during the period of depression. 5. It is lowered in persons suffering from excitement or acute mania. 6. It is found to be normal after the excitement has passed off and the patient has recovered. 7. It tends to fall as the day advances, hence melancholics tend to improve and excited patients become more excited. 8. The depression following upon an attack of acute mania is not necessarily an active depression, but rather more exhaustive in type, and the blood-pressure in these cases may remain low until it finally returns to normal upon recovery. 9. The blood-pressure is probably raised in stupor. 10. It is not always altered in delusional insanity, except in those cases where there is also some emotional disturbance. 11. In healthy, active, and excitable persons it is low as compared with healthy but apathetic individuals. 12. From this it would seem that the blood-pressure is chiefly affected in emotional or affective insanities, in contradistinction to the effective or ideational forms of mental disorder. 13. It is raised in general paralysis of the insane when there is depression, whereas in the excited types of this disease it is low, as it is also in the later stages of all types of this disease it is low, as it is also in the later stages of all may in certain individuals induce mental aberration, but it is so far not complete enough to enable him to state definitely that mental disease is usually caused by altered blood-pressure. 15. The altered

blood-pressure in different forms of insanity suggests the line of treatment which may be adopted in the various kinds of mental diseases. 16. The feeling of weight and pressure upon the top of the head, so common a symptom in melancholia, is apparently vascular in origin, and is lessened or disappears when the blood-pressure is lowered. 17. Certain depressed patients improve with nitro-glycerine, but there is difficulty in keeping the blood-pressure down with this drug, as its action is so evanescent. 18. The action of erythrol tetranitrate is more prolonged and reliable, and is more powerful in lowering the blood-pressure in melancholia. 19. The prolonged bath raises the blood-pressure, and hence is of more value in the treatment of excited patients.

Conseil-Général de la Seine—Rapport, 1898.

This is the report issued by the Commission delegated by the General Council of the Department of the Seine to make a detailed and exhaustive study of the question of the treatment of the insane in England and Scotland, and to make a comparison between institutions for the insane in the United Kingdom and those of their own country. The Commission was composed of MM. Emile Dubois, President of the General Council; Navarre, President of the Third Commission; Paul Brousse, Reporter of the Alienist Service; Pelletier, Chief of the Alienist Service; and Edouard Toulouse, Medical Superintendent of the Asylum of Villejuif (Reporter).

The Commission visited all the principal asylums in the United Kingdom, including, among others, those of Claybury, Morningside, Derby, Barony, Gartloch, Larbert, and Murthly; and give in their report detailed descriptions of the construction, administration, organisation, and special methods of treatment of these several institutions, making at the same time a minute point-by-point comparison between them and the asylums of the first rank in France. This comparison is on the whole eminently favourable to our asylums, and the Commission avow that France has much to learn from Britain in the matter of the treatment of the insane. They place special emphasis on the system of the "open door," so much practised in our leading asylums, and are even now, since their return home, making strenuous efforts to introduce it into French asylums, notwithstanding the very determined resistance with which they are being met at the hands of many of their countrymen. On one point, however, they claim to have the advantage over us—namely, in the matter of food. After a minute comparison of the number of meals, the kind, quality, and quantity of food, beverages, &c., given to patients in the asylums of the county of London on the one hand, and those of the Department of the Seine on the other, the Commission come to the following conclusion:—"We conclude, then, from this short discussion that food is more abundant in the asylums of the Seine than in the asylums of London. This may explain the reason why the rate of alimentation is comparatively so low in the latter."

Tables and plans of every kind, detailed and drawn out in that thorough and masterly way which distinguishes all French work of this description, are scattered throughout the report, and appended to it are reproductions of a series of seven photographs—two of Gartloch and five of Larbert.

One of the most interesting parts of the document, not only to the speciality, but to the general reader, and one which it would be highly instructive to give *in extenso*, but which space unfortunately forbids, is the opening chapter on English and French customs. A few extracts, however, must suffice.

"Immediately we put our foot on English soil we perceive that civilisation has taken a very different direction from ours. The Englishman is certainly a more individualist citizen than the Frenchman —at least as regards everyday life. . . . . Every Englishman is of the opinion of Spencer, who wishes that the State should as little as possible suppress individual liberty. . . . The Englishman has needs of domestic luxury which we have not. We are a people of economical habits, not to say a little miserly, renouncing superfluities, and even sometimes necessaries, in order to amass a small capital. The sentiment of English respectability is different from our sentiment of vanity. The English character is especially developed in the schools, which are as different from ours as their asylums are unlike those of our land. . . . All education must have the tendency to develop in the very highest degree the aptitudes which will form practical men. The school must, therefore, approach as much as possible the conditions of life. . . . In any one society everything has a connection. . . . We shall find in the law and the organisation of asylums the same spirit of independence and individualism which renders the asylum more self-governing and more differential, and the patient more free. . . . Utilitarianism seems to be in England the directing idea of public acts."

Delirium Tremens. Par le Dr. VILLERS. (*Extrait des Bulletin de la Société de Médecine mentale de Belgique*, 1898.)

In a most interesting paper Dr. Villers reviews the recent note by M. Jacobson, of Copenhagen, on Delirium Tremens (*Allgem. Zeitschrift für Psychiatrie*, t. 54, p. 221, 1898), and contrasts his results and those of Krafft-Ebing with the facts observed in the cases at the Hospital Saint-Jean in Brussels. The contrast is most instructive, and is fairly detailed. The chief points are that the German and Danish forms of delirium tremens are more severe, more complicated, more fatal, and occur at an earlier age than in Belgium. Dr. Villers attaches great importance, in explaining these facts, to the national habits. In Belgium, it seems, gin is still the usual beverage. In Germany delirium tremens comes on probably in those who have undermined their constitutions in early life by excesses in beer, and who, on taking to spirits, become easily delirious. All cases of delirium tremens—or

nearly all—are in chronic alcoholics, and it is the alcoholism which determines the graveness of the illness, and also the frequency of pulmonary and other complications.

Jahresbericht über die Leistungen und Fortschritte auf dem Gebiete der Neurologie und Psychiatrie (*Annual Report on Progress in the Department of Neurology and Psychiatry*). Edited by Dr. E. FLATAU and Dr. L. JACOBSOHN, in Berlin; under the direction of Professor Dr. E. MENDEL, in Berlin. S. Karger in Berlin, N.W. 6.

To give a digest of the large number of books, pamphlets, and articles in the fifty periodicals which deal with the nervous system and its disorders, as well as of those in the general medical journals throughout the world, is an undertaking of unquestionable usefulness, and it has been begun in a manner commensurate to the greatness of the task. The learned editors are supported by fifty-three collaborators, comprising names already well known in German psychiatry, and others, younger men, who will most likely in the course of time also gain distinction.

Those engaged in research and in recording research have often felt the want of such a compendium, which will at once supply them with the gist of all that has been written in every tongue during the past year. The editors state that they have had some difficulty in laying their hands on foreign contributions, so that this first volume does not reach their ideal. They wish to give with compressed brevity an epitome of all that has been done in the year 1897.

To judge by the volume before us, the progress in neurology and psychiatry during that year must have been pretty considerable. The book contains 1500 pages royal octavo, and weighs about seven pounds. The editors promise a second volume for 1898 about the middle of this year. As such an undertaking must be very expensive it is to be hoped that all authors of books and papers bearing on the subjects dealt with in the Year-book will send copies to Dr. E. Mendel, c/o S. Karger, N.W. 6, Karlstrasse 15, Berlin, Prussia. Ample preparation is made to do justice to foreign literature. One learned doctor takes care of contributions in the Swedish, Danish, and Dutch languages, another in the Spanish, a third in the Italian, a fourth in Hungarian, and Dr. Flatau, one of the editors, reports on Polish and Russian literature. To give some idea of the comprehensive nature of the undertaking it may be mentioned that the volume commences with the methods of colouring preparations (Färbetechnik) of the nervous system, occupying eleven pages; then we have anatomy, macroscopic, and microscopic, then physiology of the nervous system, then pathological anatomy and pathology. The authors then go on to nervous diseases, and end with reports on asylums and reviews of books. We wish this undertaking all success, and hope that it will receive good support in Great Britain and the colonies.

Centralblatt für Anthropologie, Ethnologie, und Urgeschichte. Herausgegeben von Dr. (phil. et med.) G. Buschan. Jahrgang 1899, Heft 1, Jena.

There is one original article in this number dealing with brachycephalic heads. A great deal of trouble has been taken in measuring and giving Greek names to the various shapes of skulls, with small results. Gustav Retzius, the son of the celebrated ethnologist of Stockholm, complained that the study of the crania of the different races is without doubt one of the most sterile of scientific researches. Dr. Wilser thinks that this is owing in Europe to the mixture of races, of which the varying forms of the heads in the same country afford a proof. The *résumés* collected from a wide field are full of interest. The reports of societies and congresses dealing with anthropology and ethnology, with reviews of books and lists of publications, join to make up an instructive number.

Protection from Lunatics and Non-restraint.

Dr. Hermann Kornfeld, of Grottkau (*Zeitschrift für Medicinalbeamte*, Heft 7, 1898), discusses two murders committed by lunatics, which have caused great sensation. The first was the murder of an actor by Richard Prince, and Dr. Kornfeld quotes a passage from the *Saturday Review*, in which the journalist complains that practising physicians are generally ignorant of the forms and types of insanity. "Progressive systematic delusions like those of Prince," observes the *Saturday Review*, "is, in spite of its enormous frequency in England, so little studied that the delusions of persecution and grandeur appear as something quite new to the majority of physicians." Dr. Kornfeld is anxious to know what English physicians will say to this. One questions whether they have as yet said anything. The scribes of the *Saturday Review* are paid for barking, but nobody thinks it worth while to throw stones at them. Certainly no one suffers more from the delusions of suspicion than physicians in charge of the insane. If men are unjustly convicted in the law courts, which happens not unfrequently, we rarely hear anything against the lawyers or proposals for new laws; but on the slightest rumour of a person unjustly detained for insanity, even for a few days, there are shouts against the doctors, and cries for new lunacy bills and new regulations, and formalities which often make the admission of lunatics to asylums so difficult that the public safety is endangered.

The other case mentioned by Dr. Kornfeld is the murder of the Marquis Berardi, who was killed when inspecting an asylum at Rome by a lunatic who had tools in his hand. The director of the asylum, Professor Bonfigli, the resident physician, and two keepers were put upon their trial for culpable negligence, but acquitted. Dr. Kornfeld considers the *pro* and *con.* between no restraint, free work, and open

doors, and the dangers to the physicians and attendants on the insane. He states that he has observed cases in which insane persons communicated their own delusions to the sane, and quotes the opinion of Bieberach, whose experience of boarding out lunatics in families at Hofbeuren, in spite of sharp medical control, was unfavourable; hence he concludes that boarding out, in order to relieve the overcrowding of asylums, is in Germany to be rejected.

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(1) *Zur Eröffnung der psychiatrischen Klinik an der Landesuniversität, Giessen* (*The Opening of the Psychiatrical Clinique at the State University of Giessen*). Von Professor SOMMER, Giessen. (*Correspondenzblatt der ärztlichen Vereine des Grossh. Hessen*, Jahrg. vi, 1896, Nos. 3 u. 4.)

(2) *Une Visite à la Clinique Psychiatrique de Giessen* (*A Visit to the Psychiatrical Clinique at Giessen*). Par le Dr. P. LADAME, de Genève. (*Annales médico-psychologiques*, Nov. to Dec., 1899.)

The credit for being first to establish psychiatrical cliniques belongs to France rather than to Germany. The latter country entered somewhat late in the movement, which began about the beginning of our century at Salpêtrière, under the auspices of Pinel and Esquirol. The study of mental diseases in Germany took a new lease of life from Griesinger, the influence of whose career has been felt in all countries. The views of Griesinger triumph to-day more especially in his native land, and as years have gone by, more and more of the chief universities of Germany have established psychiatrical cliniques—Heidelberg in 1878, Leipzig in 1882, Strasbourg in 1886, Fribourg in 1887, Halle in 1891, Wurzbourg in 1893, and finally Giessen in 1896, to which we propose more particularly to direct attention.

The University of Giessen was founded in 1607, and is pleasantly situated to the south-east of the town of Seltersberg, and forms a veritable medical village. The new psychiatrical clinique has been built in close proximity to the other cliniques, thus differing from most other asylums, which, on account of their isolation, are of little use for the purposes of teaching and research. In spite, however, of this close proximity, the psychiatrical clinique has a separate and independent management, necessary for the State care of the insane, and only borrows electricity for purposes of illumination, and makes use of the central dispensary for medicinal remedies.

The asylum is mainly built on the "pavilion" system, although several important parts are connected by corridors, and the evils of a pure "pavilion" system are also somewhat remedied by extensive telephonic communications.

The asylum consists of the following buildings:

1. A central block, containing on the ground-floor the administrative offices and the "policlinique" (out-patients), which is mainly for mild cases, generally called "nervous," and which are instructive when compared with real cases of mental disease with their manifold nervo-

pathological complications. On this floor is situated a library and an anatomical museum, used also as a research laboratory, although most of the section-cutting is done at the Pathological Institute. On the first floor is situated the lecture room, surrounded by different laboratories devoted to pathological chemistry (toxins, &c.), anatomy and histology, experimental psychology, and psycho-physics. In these rooms one finds all the equipment necessary for original research, and amongst other things a phonograph, which has proved of great service. The cost of equipping these laboratories was about £700. Two medical officers are quartered in this block.

2. Behind the central block, and separated from it by a garden, is a building containing the kitchen, head cook's room, and store-room. Adjoining the store-room are two distribution rooms, where the food is served out to both sides.

3. These two buildings, central block and kitchen, form the middle axis of the asylum, and on each side are arranged symmetrically four separate blocks, forming the two sides, male and female.

(*a*) On each side of, and in the same line as the central block, but quite detached, is a pavilion reserved for quiet patients, who need very little supervision, and who are allowed considerable freedom. These buildings are practically double villas, having separate entrances and sanitary blocks, but with a common scullery. The front aspect of the asylum is formed by the central block and these two villas.

In the same line as the kitchen and arranged symmetrically are four other blocks, two on each side.

(*b*) The buildings immediately flanking the kitchen (F_2, M_2) are occupied by quiet patients who require constant supervision (melancholics, suicidals). In these buildings are resident, on the female side, three doctors, and on the male side a "Volontärarzt" (clinical). Besides the day-room and single rooms there is a large observation dormitory, where some of the patients are treated on the principle of giving complete rest, and are kept in bed day and night.

(*c*) Flanking these two buildings are two others (F_3, M_3), the one situated to the right of F_2, and the other to the left of M_2. They accommodate the noisier class of patients who require supervision. The head attendants on each side have their quarters in these blocks, and have special charge of the observation rooms. Here one finds rooms fully equipped for the clinical examination of the patients, and at hand is all that is necessary for exact scientific observations from both the physical and psychical point of view (including photographic apparatus, stereoscope, cinematograph, phonograph, &c.). In the upper story of these blocks are self-contained apartments for semi-quiet patients, with a day-room, two dormitories, and two single rooms (latter are acoustically isolated), and sanitary blocks.

(*d*) Behind the two latter blocks and connected with each by a short corridor, are the two remaining blocks (F_4, M_4), each of which consists of a gallery of single rooms. Attached to each of these blocks is a bath-room and a spare bedroom. In the basement is a room for the storage of dirty linen previous to being sent out to wash. The absence of a laundry is a surprising feature.

Separate from the rest of the asylum is a residence for the medical director.

The male and female sides are identical in every respect, with the exception of M3, which has under it the central station for the steam heating apparatus, with six boilers and a coal-cellar.

Hot water for the baths is obtained from reservoirs, which are heated by means of steam coils. Besides the general bath-rooms (which possess moveable baths, which can be moved on rails to the single rooms), each continuous observation dormitory has curtained baths, like those at Wurzburg, in which acute cases can be placed for extended periods of time in close proximity to their beds, tepid water being used. These are also used for cases which are physically weak or have illnesses which forbid their removal.

The wards are well furnished and the floors are covered with linoleum. The institution is lighted throughout by electricity. In the observation dormitories, in place of electric lights being hung from the ceiling, they are placed fairly low down at each corner of the room, so as to throw a good light upon the beds, and to facilitate the examination of the backs of those continually in bed.

We have to congratulate Professor Sommer on his asylum, the internal arrangements of which have largely been carried out under his personal direction. We have also to congratulate him on the excellent opportunities afforded for clinical observation and research as regards mental disease, and express the hope that they may be productive of good work.

Many in this country will envy his position when it is understood that five assistant medical officers besides himself form the staff of an asylum which is built to accommodate 100 patients, the average number being, however, only from 50 to 62.

The estimated cost of the buildings was £36,750, but this has been exceeded. Private patients pay from three to fifteen marks a day; other patients invariably one mark a day.

Influenza som Aarsg til Sindssygdom: Historisk-klinisk Undersögelse af H. Fehr, Reervelaege ved Sindssygeansalten i Viborg (*Influenza as a Cause of Insanity*, by H. Fehr). Copenhagen, 1889, royal 8vo, pp. 338.

It confers distinction on the asylum of Viborg to have, within so short an interval, sent out two such able monographs as Dr. Hallager's book on Epilepsy and Dr. Fehr's book upon influenza as a cause of insanity. The author shows great learning, unwearied diligence, and much power of clinical observation and analysis. He traces the history of this *morbus omnium maxime epidemicus* from the papyrus Ebers, the most ancient work on medicine, down to the latest periodicals of the day. Especially interesting are Dr. Fehr's studies of the history of influenza during the Middle Ages. A virulent epidemic is described by Jacob von Königshoven in 1387, and by Nicolas de Baye in 1404.

He shows that in those times also influenza was observed occasionally to affect the mind, causing depression, melancholia, and a proclivity to suicide.

In the next division of the book the author considers the influence of acute diseases—especially smallpox, typhoid and rheumatic fevers, and pneumonia—in inducing delirium and subsequent mental derangement. The relative frequency of insanity attributed to influenza is really small. Fehr finds typhoid assigned as the cause of insanity in 1·18 in the thousand cases of this fever; influenza in but 0·52 in the thousand. Dr. Fehr describes the great pandemic of 1889 and 1890. He illustrates the different ways in which influenza has been found to affect the minds of patients by brief descriptions of 355 cases, partly observed by himself and partly collected from a wide survey of European and American medical literature. He treats of the microbes which are supposed to be the cause of influenza; the most likely of these claimants seems to be the bacillus described by Pfeiffer. Dr. Fehr thinks that the toxin of influenza induces insanity by attacking the weak parts of the organism, thus falling back upon predisposition, to which writers upon lunacy attribute so much, and for which they can give so little explanation. He finds by statistical inquiries that the prevalence of influenza is accompanied by an increase in the number of suicides. Wildermuth, in his work upon Sonderkrankenanstalten, also observes that the great epidemic of 1889—90 was followed by a long-continued state of nervous depression in many persons in Germany. In treating patients affected with this form of insanity he found that hypnotics did more harm than good, and preferred to calm excitement by warm baths and the wet pack. He tries to support the system by frequent meals. Where food is persistently refused he thinks it more prudent not to delay resorting to forcible feeding rather than to wait for the effects of hunger. Where collapse occurs he has some faith in injections of solutions of common salt. For prognosis he observes that out of 52 cases observed by himself there were 26 recovered, 17 remained insane, and 9 died. Dr. Fehr finishes with a list of works upon influenza, of which, as far as the mental disturbances go, his book may be considered as a thorough-going summary.

Methods of Staining the Nervous System. By Dr. B. Pollack. Translated from the 2nd German edition by W. R. Jack, M.D., B.Sc. Whittaker and Co., Paternoster Square, 1899. 4*s*.

The second edition of Pollack's practical work, which appeared in the original German within a year of the date of issue of the first, presents several additions. It has the advantage, for readers in this country, of appearing also in an English translation. For the benefit of those unacquainted with the work we may state its principal contents as follows:—(1) methods of section of the brain; (2) hardening fluids for the central nervous system, with general remarks on hardening and staining; (3) examination of fresh unstained specimens;

(4) methods of embedding, with information upon microtomes; (5) method of preparing serial sections; (6) methods of staining the nerve-cells, the medullated sheaths, the axis-cylinders, the neuroglia, and the peripheral nervous system; (7) hints on photography (of specimens), and on drawing apparatus; (8) general practical remarks; (9) bibliography. It is curious that no reference is made to the fresh method of Bevan Lewis, which foreign writers appear studiously to ignore. The method is worthy of attention even on the part of those who are wedded to prolonged and elaborate methods of preparation, and to the use of cumbrous and expensive microtomes. Whilst all the methods of preparation referred to—and they are numerous—are clearly described, the chief ones, such as Golgi's, Nissl's, Weigert's (medullated sheath and neuroglia), and Ehrlich's methylene blue, are especially thoroughly gone into, and their most serviceable modifications are duly noted. The student is not left bewildered by an endless and indiscriminate description of methods, but will find, especially in the general practical remarks, suggestions for his guidance, based upon the author's experience, gathered under the tuition of distinguished workers. The book may be thoroughly recommended as a valuable, almost necessary work of reference for the asylum pathological laboratory.

On the Study of the Hand for Indications of Local and General Disease. By Edward Blake, M.D. Published by Glaisher, London, 1899, 2nd edit., large 8vo, pp. 131, with 38 illustrations.

This monograph is of interest to physicians of any and every speciality, containing a large amount of careful observation and much valuable speculation and suggestiveness. The illustrations alone are a very valuable collection of instruction—very admirably produced, and the facts relating to the various conditions described manifest a wide extent of medical research and erudition. The brochure is indeed a mine of interesting information on the subject.

The addition to the work of a chapter on the dynamics of respiration, with paragraphs on lung development and a dilated heart condition, can scarcely be considered apropos to the subject, however ingeniously the author may connect them.

The book is admirably printed, and both in matter and form is worthy a place on every physician's book-shelf.

Part III.—Psychological Retrospect.

FRENCH RETROSPECT.

By Dr. Macevoy.

New Contribution to the Study of False Porencephaly and True Porencephaly.—Bourneville and Schwartz, in *Progrès Médical* (No. 37, and No. 39, 1898), relate two cases of the former condition and one of the latter; as usual, full detailed notes are given of symptoms during life and post-mortem appearances. With further knowledge, the authors maintain their former view—thus differing from Heschl,—that arrest of development is the sole cause of true porencephaly, and that no pathological process is capable of bringing about an identical lesion to that found in true porencephaly.

The salient points which characterise true porencephaly are—

1. The cavity is more or less regularly funnel-shaped, with its base external and the apex directed towards the ventricle; the surface is smooth, and its only covering is the outer layer of the pia mater.

2. The convolutions present a characteristic and striking disposition, upon which much stress is laid. They all radiate towards the bottom of the excavation, which is a true point of convergence, whence they seem to take root.

3. The orifice of communication is always regular, often perfectly round—constituting the porus. This characteristic porus is always situated at the most dependent point of the porencephalic funnel.

4. Around the excavation one almost constantly meets with other anomalies, due to the same arrest of development. For instance, in the case described, the frontal and ascending parietal convolutions were obviously not destroyed, but either they were not developed or deviated from their normal path.

5. The lesions found in cases of what we term false porencephaly may be congenital, from disease of the fœtus, but they may also occur after birth, even long after; but true porencephaly is *always* a congenital disease of intra-uterine life, and *never* occurs after birth.

As regards the pathological process which brings about the loss of cerebral substance, so far we are only on hypothetical ground. Bourneville and Schwartz believe in the vascular theory, basing their view especially on the fact that the seat of the lesion nearly always involves the region of the middle cerebral artery.

Intangible Epilepsy.—Dr. Gelineau (*Revue de Psychiatrie*, 1898, No. 12) suggests the appellation intangible for those cases of epilepsy which resist all forms of treatment. He recognises two varieties. In the first variety, under treatment the attacks are fewer and less severe, but at the same time there occur marked alterations in the psychical condition of the patient. Instead of being calm, good-natured, easily managed, he becomes morose, violent, and extremely irritable. In

some cases, with the complete disappearance of the fits there may supervene a state of dangerous violence. In others, again, dementia may succeed the suppression of the fits. Notes of cases are given.

The second variety of intangible epilepsy comprises those cases which practically do not react to any kind of treatment. Whatever drug is tried, it is obvious in these cases that not only is it not well tolerated, but the condition is aggravated. Notes of an interesting case of this kind are given.

Dr. Gelineau believes that intangible epilepsy is rare; in a long practice he has only observed eight or ten cases. The cause seems obscure. It is important, however, to recognise this kind of epilepsy, for while it is sad to have to fold one's arms in presence of a case tormented with frequently recurring fits, we must never forget that one of our great duties is "primum, non nocere!"

Degeneration and General Paralysis.—Professor Joffroy (*Revue de Psychiatrie*, 1898, No. 10) relates the case of a man, a degenerate under M. Magnan's care for some time, who developed general paralysis, and was ultimately admitted under his (Prof. Joffroy's) care, as an illustration of the view which he holds,—that a morbid heredity more or less marked, degeneration more or less obvious, is a frequent if not indispensable factor in the ætiology of general paralysis of the insane.

The patient, a foundling, born in 1851, of somewhat feminine build and of decidedly feminine habits in youth, became strongly addicted to sodomy after the age of fifteen, and led a life of debauch in Paris. In 1893 his memory began to fail, and he was arrested for occupying some one else's bed (? mistaking the story of the house). Sent to the asylum, M. Magnan noticed delusions, loss of memory, unequal pupils, and slight affection of speech.

In May, 1895, he came under Prof. Joffroy's care. His condition did not vary much until 1897, during which interval he had been working as tailor in the asylum. He now became more and more demented, with fleeting delusions. In November, 1897, he took to his bed, had general tremors, and was of dirty habits. In January, 1898, his speech became incomprehensible, and he died after getting weaker and weaker, physically and intellectually, in March, 1898. At the autopsy, characteristic lesions of general paralysis were found in the brain.

In considering the relation of general paralysis to degeneration, says Joffroy, the well-recognised rarity of the incidence of general paralysis among chronic lunatics is not an argument of weight against his view, for only a minority of degenerates are found in asylums.

In this case syphilis and alcohol could apparently be well excluded as ætiological factors. Venereal excesses? Joffroy dismisses this factor, because the patient was not a masturbator, and had a repugnance for the female sex, and because "all his genital life consisted in unnatural acts, in which he was almost constantly the passive agent." He therefore falls back on mental degeneration as the cause—if not the sole cause, at least the preponderant one—of the onset of general paralysis.

If the stigmata of degeneration, and especially psychical stigmata, are not commonly noted in the history of cases of general paralysis, it

is perhaps because they are carefully concealed by the patient when he is well; for, says Joffroy, there is one point in connection with the history of general paralysis to which it is well to draw attention. It is not rare to see the disease manifesting itself at the onset by morbid acts recalling those of degenerates,—offences against public decency, for example. As a rule, they are looked upon as purely and simply manifestations of general paralysis. But might we not go further back, and suppose that there already existed in the individual a psychical stigma, carefully concealed so long as he enjoyed his reason, but laid bare when general paralysis caused enfeeblement of his intellectual faculties? We believe it is worth while drawing the attention of alienists and medico-legal experts to this point. Inquiry would probably often give negative results, on account of the considerable difficulties which the question presents; but one might, perhaps, obtain some extremely interesting positive ones.

As regards the histological examination of the spinal cord in the case referred to above, Joffroy lays stress upon the fact that very marked lesions of the nerve-cells were found associated with practically normal nerve-fibres and very slight proliferation of the neuroglia; at certain levels the sections exhibited complete disappearance of a number of cells. This is in accordance with the view that in general paralysis, degeneration of the neuron is primary.

Tabetic Lesions in General Paralysis.—Dr. Etienne Rabaud (in *Revue de Psychiatrie*, 1899, No. 2) brings forward a useful contribution to our knowledge of the relation of tabes to general paralysis. For many years the question has been on the "tapis," whether in cases of general paralysis, which present symptoms of locomotor ataxy, we are to look upon the disease as simply a variety of general paralysis with lesions spreading to the posterior columns, &c.; or whether we are in presence of an association of the two diseases, general paralysis and locomotor ataxy.

From the clinical standpoint, certain characteristics in the symptoms may lead one to suspect general paralysis in a patient suffering from spinal disease. Variability is an important peculiarity. Lightning pains may suddenly appear, persist for a few weeks or months, and then disappear; the reflexes become exaggerated, then are found later on diminished or lost. A remission of longer or shorter duration occurs, &c. &c. But, after all, the spinal symptoms of general paralysis are not well defined, and the sole presence of the tabetic syndroma may lead to errors.

Does morbid anatomy help us? Microscopically does a paralytic sclerosis differ from ataxic sclerosis? Rabaud answers yes.

It is of the utmost importance to examine the cord methodically and carefully in its whole length, for while the localisation of the sclerosis in general paralysis is very similar to that of locomotor ataxy it is not identical. According to him there are four important differences in general paralysis:

(*a*) The localisation of the tabetiform lesions varies from one level to another of the cord. It occupies along a certain track the site of exogenous fibres, then without definite transition is confined to a band occupied by endogenous fibres.

(*b*) The examination of one section shows that there is no precise fasciculation; the lesions are diffuse.

(*c*) The posterior roots and the zone of Lissauer are healthy, or almost normal in general paralysis—even in association with marked lesions of the exogenous zones, as may be seen in some sections. This is very unlike simple tabes.

(*d*) The cells of the grey matter, those of the anterior horns, like those of the columns of Clarke, are affected. The affection varies in various segments of the cord.

These taken together clearly differentiate the two diseases. As regards the nature and origin of the morbid process, after carefully considering the distribution of the lesions, &c., Rabaud rejects various theories—vascular, meningitic, &c.,—and believes that the primitive lesion is intra-medullar, and affects the neurons of the grey matter. He concludes, with Joffroy, that "general paralysis does not, like locomotor ataxy, affect an anatomical system having a well-individualised physiological function, but attacks various anatomical systems possessing multiple physiological functions." Moreover, he adds, the various sclerotic lesions which are found in general paralysis can be explained by the affection of the neurons of the cornua.

In conclusion, while the author does not deny the possible co-existence of tabes dorsalis and general paralysis, he believes it is rare, and one must always be on one's guard in presence of a spinal case developing symptoms of general paralysis. The exact diagnosis is always difficult to establish, and often can only be settled by the help of pathological anatomy.

The Treatment of Morphinomania by Sudden Suppression, by A. Lutaud and B. Deering (*Revue de Psychiatrie*, 1899, No. 2).—While each year adds extensively to our knowledge of morphinomania, the question of treatment is still one that gives rise to marked difference of opinion. One class of physicians, including especially the Germans, advocate the sudden withdrawal of the drug as a first step; the opposite school, among whom are the majority of French writers, holds that this method may be the cause of grave accidents. Drs. Lutaud and Deering believe that the latter view is ill-founded.

With regard to cases of morphinomania, some distinction must be made, however; morphinomania, say our authors, is only curable when present in individuals not suffering from some necessarily fatal affection; it is only susceptible of rapid cure by sudden suppression during the period which precedes the cachectic state.

That sudden suppression of the drug is not fatal to life has been proved over and over again by the experience of prisons, in which morphinomaniacs are not unfrequently incarcerated for theft, &c. With regard to rapid suppression (that is gradual diminution, culminating in absolute suppression within four to eight days), not only is it possible, but Lutaud and Deering believe that it is the only rational method of treatment in moderate cases, and in patients who are not suffering from some serious organic disease. They except cases of asthma, phthisis, locomotor ataxy, or with well-marked cardiac and pulmonary lesions.

In order to carry it out, compulsory or voluntary sequestration is

necessary; eight days of it do much more good to the patient than a year of patience and attentive care.

More than thirty observations have been collected by the authors, in which sudden suppression has led to a cure without any serious symptoms; while, on the other hand, "we still await authentic facts showing that this suppression can cause the dangers which one sees enumerated in some of our classical text-books."

The Non-equivalence of the two Cerebral Hemispheres.—It is well known that several peculiarities differentiate the right half from the left half of the brain—development, configuration, weight, physiological functions, &c.; . . . but an important point is the degree of secondary degeneration in the cord, consecutive to destructive lesions of the two sides; it is this question which MM. Klippel especially examines in the *Revue de Psychiatrie*, 1898, No. 2.

The following are some of his conclusions:

(*a*) Degeneration of the crossed pyramidal tract is more marked in lesions of the Rolandic convolutions of the grey central nuclei and capsular fibres when the focus of disease is in the left hemisphere.

(*b*) Participation of the direct pyramidal tract is more frequent with lesions of the left hemisphere.

The author also refers in this article to other pathological facts which bear upon the question of the non-equivalence of the two hemispheres, such as the incidence of emotional hemiplegia, reaction of the pharyngeal reflex with right and left hemiplegia, functional hemiplegia, hemianæsthesia, &c.

RETROSPECT OF CRIMINAL ANTHROPOLOGY.

By Havelock Ellis.

The Relation of Criminal Anthropology to Psychiatry.—In the excellent *Centralblatt für Anthropologie* (edited by Dr. Buschan), to which the attention of readers of the Journal has been called in previous years, a brief but pregnant paper has lately appeared on the above subject by Prof. Zuccarelli ('Die Beziehungen zwischen Kriminal-Anthropologie, gerichtliche Medizin, und Psychiatrie,' 1898). Criminal anthropology has, of course, in common with psychiatry, the author remarks, the domain of psychic disturbances and the methods of clinical observation. But does criminal anthropology mean no more than that? Assuredly not. The specific and fundamental element of criminal anthropology is the direct, extended, and detailed study of anthropological morphology, both individual and racial, external and internal. It takes its methods and material from general anthropology; it makes use of comparative anatomy and physiology to ascertain the ontogenetic and phylogenetic position of anatomical forms and states of development; it takes advantage of general pathology and pathological anatomy. It suffices to recall the extent to which morphological questions have been recently studied, and the interest such

questions have aroused. The author refers especially to investigations regarding supernumerary bones of the skull (os bregmaticum, ossa parietalia and præparietalia), and anomalies of the gums and teeth; while he points out that the passionate discussion aroused by the investigations and explorations opened out by criminal anthropology alone suffice to show the new and independent character of the great field it presents, and its tendency to increase and become distinct from psychiatry, and the other sciences which it completes and supports. It is, further, the business of criminal anthropology to study prostitutes and the waifs and strays of society, and to investigate slang, prison and other inscriptions, and the manners and customs of the lowest classes, not only as a basis for the diagnosis, prognosis, and treatment of the individual and the family, but for the sake of social prophylaxis.

Prof. Zuccarelli concludes with the expression of a hope that the necessity for separate instruction in criminal anthropology will gradually be recognised.

The Elmira Reformatory.—The twenty-second year-book of this institution (1897) shows that nearly 9000 prisoners have now been submitted to the indeterminate sentence as here carried out. It is unfortunate that the prison is generally overcrowded, and in the present report, as in many previous reports, the managers regret that they are unable to supply each inmate with a separate cell or sleeping apartment. While judges are constantly recognising the value of the Elmira system, by committing prisoners to this reformatory, there appears to be no corresponding increase of recognition on the part of the State. By recently prohibiting remunerative labour the State has indeed done its best to hamper the work of the reformatory.

The year in question has been the first full year without employment of prisoners for the purpose of deriving income from their labour. This change appears to have done much to lead to the development of the recently organised Manual Training Department, which now includes nearly one third of the whole number of inmates, especially the very defective and intractable. There is thus accommodation for the instruction of nearly 500 pupils, while there are three instructors from outside the prison and forty instructors from among the inmates themselves. The report of Mr. Bates, director of the Manual Training Department, forms the largest and most interesting portion of the present year-book, and is fully illustrated. As here carried out in a very eclectic manner, manual training is found to have the most beneficial influence on the defective nervous systems of the "wayward weaklings" who form, as the general superintendent here states, the majority of the inmates of a prison.

The report of the physician (Dr. Wey) shows that the health of the prison has not been good during the year under consideration. This is largely attributed to the overcrowding and a defective water-supply.

We miss the anthropological data which have often been so instructive in these year-books. It has also been found necessary to postpone the proposed experiments on food and feeding as influences on physical and moral improvement.

Homicidal Criminals.—Dr. Allison, the superintendent of the Matteawan State Hospital for Insane Criminals, has lately brought forward some of the facts that come under his notice indicating that mental disease and homicide are closely related, and that insanity is a direct and prolific cause of the homicidal crimes that lead to prison (H. C. Allison, "Insanity and Homicide," *Proceedings of the American Medico-Psychological Association*, 1898). He shows not only that crimes against the person are much more often associated with insanity than crimes against property, but that, out of 179 insane persons in Matteawan who have committed murder, not less than 53 per cent. are received from the prisons after they have been convicted and sentenced for life, although, so far as it is possible to judge from their histories, and from the character and course of their disease, at least 40 per cent. of such convicted cases were insane at the time the crime was committed.

Epilepsy does not appear to be a prolific cause of homicide; out of 2080 cases of insane offenders only 70 were epileptic. Nearly one half of the homicidal cases from the prisons (45 per cent.) show some form of mania, with delusions of persecution; 30 per cent. suffer from melancholia; 17 per cent. are feeble-minded and imbecile; 4·2 per cent. epileptic. Of cases charged with murder and manslaughter, and coming not from prison but direct from the courts, 56 per cent. are maniacal, only 12 per cent. melancholic (and then offering much encouragement for care); 20 per cent. so demented or weak-minded as to be considered irresponsible, and 5·6 per cent. epileptic.

The author remarks that the question of criminal heredity is difficult to investigate, but refers to the following cases now under his care:—Two brothers, one convicted of two assaults to kill, and the other of robbery in the first degree; two brothers, both accused of murder in the second degree; two cousins, both charged with assault to kill; father and son, father had committed four homicides, and the son was indicted for assault to kill; two sisters, one accused of assault to kill, and the other of assault in the third degree; two brothers, both convicted, one of murder and the other of forgery; two brothers, both committed murder in the first degree.

Dr. Allison considers that the insane hospital is a necessary adjunct to the prison, and that it should be reformatory in character, not a mere receptacle for lunatics. He insists on the importance of a good medical service, so that the insane may be at once weeded out; and he argues that prison physicians should possess greater power and authority than they usually do at present, and that there should be a better system of case records and case histories. He further points out the necessity for a more thorough examination by the courts of the mental condition of persons charged with crime, and refers to the unsatisfactory position in which experts are at present placed. "There is a growing opinion," he remarks, "that experts should be summoned by the court, should have full access to the defendant, and, after all evidence has been submitted, should make to the court a statement of facts from which their deductions are drawn, and report in full the reasons for their conclusions."

Feigned Insanity among Criminals.—Prof. Penta has recently pub-

lished a series of articles dealing generally with the simulation of insanity by prisoners, and recording his own observations at Naples (Pasquale Penta, "La Simulazione della Follia nelle Carceri Giudiziane di Napoli," *Rivista Mensile di Psichiatria Forense*, 1898). After quoting the statements of Conolly Norman, Krafft-Ebing, Jessin, Schüle, &c., concerning the rarity of simulated insanity, Penta remarks that Southern Italy seems not only to possess an unhappy supremacy in crime, but also in simulation. In the prisons of Naples, during three years alone, he has unmasked more than one hundred simulations. He adds that real insanity is also common, but that 75 per cent. of all the cases are simulated. He records details of 36 of the cases he has observed.

The motives leading to the simulation of insanity and convulsions at Naples are very various. A very common motive is the wish to be put on sick diet; with this object, in one of the cases recorded a man simulated insanity and refused all food for thirty-six hours; another (a woman) adopted the same course for two days. At other times the motive is anxiety to escape punishment; with this object there is sometimes a pretence of suicide, although the results of this may be much more serious than the punishment inflicted. In some cases, again, the motive is simply a desire to annoy or make fun of the officials, just as children like to play at hide-and-seek, merely for amusement. In other cases it may be merely a wish to be put into another cell. Among the uncondemned a desire to postpone the trial, or to be tried on a lucky day, is a frequent motive. In the majority of cases, however, the motive of the simulation is much more serious, and, after all other devices have failed, it is the criminal's final effort to exchange a long period of incarceration in a prison for a shorter period in an asylum.

With regard to the forms of insanity which are simulated, Penta finds that systematised delusions are rare; occasionally he has met with ideas of persecution, but only once a really serious attempt to imitate systematised delusions. Melancholia is also comparatively rare, only three cases having been met with, two in women, one in a man; the latter was a coachman, who sat all day doubled up, and pretending to talk to his horses, and who only answered questions by a deep sigh; while one of the women, beginning with symptoms of melancholia, refusal of food, &c., proceeded to pile up the symptoms, tear her clothes, exhibit herself indecently, and become filthy in her habits, smearing herself with her excretions, until, finding that no effect was produced, she became suddenly sane. Mania comes next in order of increasing frequency, then epilepsy. Many forms of epilepsy are simulated,—partial or general convulsions, automatism, post-epileptic stupor; sometimes the simulators are real epileptics, suffering from other forms of convulsive attack. Penta describes at some length a kind of pseudo-epileptic attack to which the impulsive and irascible criminals of Naples are very liable; moved by some emotion of hate or anger or rebellion, their eyes appear to protrude, the face becomes congested, and the subject throws himself on the ground, screams, tears, bites, &c., and behaves generally like a savage, an imbecile, or a child in a violent temper. He may then pretend that he has had

a fit, and it is quite true that in some cases there is no distinct frontier between these attacks and epilepsy, but usually there is no loss of consciousness, and in the majority of cases these fits are merely violent emotional crises; though neither epileptic nor hysterical, they are distinctly morbid. By far the greater number of simulators, however, feign dementia in its most severe forms, especially complete stupor and extraordinary incoherence, either because this is easiest to see and observe, or because it is really most related to the psychic organisation of the criminal.

In discussing the diagnosis of feigned insanity Penta refers to its rapid and sudden appearance, and to the equally sudden manner in which the symptoms disappear, leaving no trace behind them, no phase of exhaustion. The duration of the symptoms is also very short, the criminal's power of will not being sufficiently strong to enable him to concentrate his attention for a long period on the part he is playing. There are, however, exceptions, and Penta records a remarkable case in which a man became mute, violent, suicidal, and filthy in his habits, and remained so for a long period; at last he was sent into the asylum (under Prof. Virgilio's care), and immediately, having gained his object, became perfectly sane, and all the symptoms disappeared. In such a case, it must be added, we are not dealing with a normal form. In another case the simulator submitted to be artificially fed for four months. In many cases the criminal simulator reveals himself by the sheer stupidity by which he allows himself to be taken off his guard, and even confides his plans. It is often sufficient to observe him when he is unaware of observation, and in any case it will be found that the expression of his eyes, as well as his animal functions (sleep, respiration, pulse), are in striking contrast with his assumed insanity; thus he is almost certain to watch carefully to note the effect he is producing. The most important characters, however, Penta regards as the gross and strange character of the insanity, and the extravagant and discordant character of the symptoms; the symptoms are always those that are vulgarly believed to characterise insanity. In conclusion, Penta points out the great importance, in the interests of justice, of attaching an alienist to every large prison; it is impossible for an outside expert, however skilful, to take the place of one who is on the spot and who has constant opportunities of observation.

Part IV.—Notes and News.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

General Meeting.

A General Meeting was held at the Rooms of the Association, London, on May 11th, 1899. A meeting of the Council was held earlier in the day.

Members present at General Meeting:—Drs. H. Hayes Newington (Chairman), J. B. Spence, Ernest W. White, Fletcher Beach, R. Percy Smith, F. W. Mott, G. E. Shuttleworth, T. B. Hyslop, H. Gardiner Hill, A. Helen Boyle, David Bower, G. F. Blandford, E. B. Whitcombe, W. H. R. Rivers, J. R. Whitwell, P. W. MacDonald, W. R. Watson, Margaret Orange, W. Crochley Clapham, F. C. Gayton, R. P. Alexander, J. E. M. Finch, W. H. Kesteven, H. T. Aveline, J. Carlyle Johnstone, J. G. Soutar, H. A. Benham, C. T. Ewart, W. S. Kay, F. Ashley Elkins, G. Braine-Hartnell, R. Brayne, P. E. Campbell, F. R. P. Taylor, R. Langdon-Down, C. H. Bond, W. Ernest Jones, H. C. MacBryan, G. E. Mould, J. Sutcliffe, J. R. Lord, A. H. Stocker, J. F. Briscoe, P. J. Baily, H. Wolseley-Lewis, J. Stirling Christie, F. H. Edwards, H. J. Macevoy, W. J. Mackeown, Stangman Grubb, W. F. Hanfield Haslett, and Robert Jones (General Secretary).

The following visitors were also present:—Drs. W. J. Koenig (Berlin), Ben Hall, H. Pulford, and Hamilton Wright.

The Chairman regretted the unavoidable absence of the President, who was abroad.

Letters or telegrams of apology for non-attendance were also announced from Drs. Rayner, J. M. Moody, T. W. McDowall, Conolly Norman, C. Mercier, J. Chambers, and A. R. Turnbull.

The following were elected ordinary members:—E. H. Beresford, J. H. Chaldecott, J. A. Cooke, Eustace C. Frend, Samuel James Gilfillan, J. H. Goodliffe, Herbert Pulford, A. Y. Richardson, Arthur Rotherham, Reginald Oliver Sibley.

A letter was read from Mrs. Casberd-Boteler thanking the President and members of the Association for the resolution of sympathy with her on the death of her father, Dr. J. H. Paul, late Emeritus Treasurer and member of the Association.

The Chairman (Dr. Hayes Newington) announced that the Annual Meeting would be held in London on the 27th and 28th of July next, and he then called upon Dr. Mott to give his demonstration.

Dr. Mott gave a demonstration upon "Changes in the Brain, Muscles, and other Organs, found in Persons having died with Prolonged Epileptiform Convulsions," illustrated by the following cases.

The brain and spinal cord were examined with Nissl's and Weigert's methods.

(1) Boy in whom death (due probably to sunstroke) was preceded by twenty-two fits; temp. 108°.

(2) Left-sided thrombosis of great anastomotic veins of Trollard, followed by the same condition on the right side, with subsequent right-sided fits and then left-sided ones; temp. 107·5°.

(3) Three cases of "status epilepticus" in young patients who previously were healthy physically; death due to asphyxia and cardiac failure; venous engorgement of the organs.

(4) Rupture of the right middle meningeal artery; 400 left-sided fits.

(5) A supposed epileptic patient—death preceded by seven fits (uræmia?); post-mortem signs of chronic nephritis.

(6) Spinal cord of a general paralytic with hæmorrhage from the spinal veins; temp. 109°.

(7) Septicæmia with prolonged pyrexia, in which there was marked anæmia present and hæmorrhages, but the pyramidal cells of the cortex appeared to be normal.

In Cases 1 to 3 inclusive minute hæmorrhages were seen in the brain, venous congestion and stasis; œdema and distension of the perivascular and perineuronal lymph spaces. In some of the cases a continuation could be made out between these latter two spaces. The cells were stained a uniform colour. The normal Nissl's bodies could not be seen either in the cortical cell body or on its protoplasmic processes.

By staining with polychrome blue or methyl blue and safranin the body of the cortical cell could be seen occupied by a fine pink-stained network, on the lines of which there were encrusted blue particles. The chromatic bodies on the protoplasmic processes were absent or else very attenuated, the nucleolus being the only portion of the cell which retained the normal blue stain. The cells of the anterior horns of the cord and their homologues in the medulla were examined in the cases under the headings of "2" and "3," but showed only slight changes.

The causes which may have brought about these changes were considered.

(1) *Pyrexia.*—It was noticed that no marked changes like those seen in the cortical cells could be detected in the spinal cells (cord of "Case 1" was not examined) except in the general paralytic patient, and in this case these changes were possibly due to pyrexia.

(2) *Exhaustion.*—Due to the conversion of energy used in the production of the fits. Against this probable cause it was noted that in "Case 4" there was no appreciable difference in the appearances of the cells of either hemisphere, and also, as already mentioned, in most of the cases no changes were detected in the cells of the anterior horns of the spinal cord.

These facts, therefore, point to local circulatory differences as the chief cause in producing the appearances noticed in the cells of the cortex. Increased amount of venous blood in the closed cranial cavity leads to diminution of the arterial blood; venous congestion results in arterio-capillary anæmia of the brain. From the anatomical arrangement of the veins congestion and exudation, and hence an increased amount of CO_2, would be most marked on the external, and upper portions of the internal, surfaces of the brain. It was suggested that increase of CO_2 or other products in the lymph might be the principal cause of the marked bio-chemical changes observed in the cortical pyramidal cells. In five fatal cases of "status epilepticus," and in a large number of general paralytics who died after prolonged epileptiform convulsions, fatty degeneration was noticed under the microscope of the striped muscles, cardiac muscle, kidneys, and liver.

The CHAIRMAN thanked Dr. Mott on behalf of the meeting for his valuable demonstration.

Dr. ROBERT JONES said that one or two points suggested themselves to him, and one was the relation of the nucleus to the nerve-cell. Is the nucleus extruded because the cell is dead, or is the extrusion of the nucleus the actual cause of the death of the cell itself? Again, whether in these very deeply stained cells there had been an increase of the sensitiveness of the protoplasmic substance? One might take the analogue of Erb's period of degeneration, viz. that with a certain nerve-muscle change you have increased electrical changes. That is to say, one has with a voltaic current a sudden and much more marked reaction when the part is diseased. If this is so one has an explanation more or less of the continuation of epileptic fits, viz. that a stimulus which is not quite sufficient in itself to give rise to a series of convulsions will, when decay has altered the nutritive or the bio-chemical condition of the cell, more easily irritate and be capable of causing a series of fits to continue. Another very interesting point was as to how far we can relieve the condition which apparently is due to a venous congestion. They had, on Dr. Mott's suggestion, bled one or two cases at Claybury, but with only temporary relief. In all probability the bleeding may have been delayed too long.

Dr. MOTT in reply said that the question as to the nucleus was one that he had not yet made up his mind about, but he thought that probably the cell dies, then fluid soaks in and swelling takes place, and the nucleus is extruded. Whether the death of the cell is due to the fluid soaking in and bursting the cell, or whether it is due to the breaking up of the essential substance of the cell, namely, the achromatic fibrillary substance, he did not know. Then with regard to degeneration and excitability, that was a point which he was glad Dr. Jones mentioned, because it was very important, and it was one that he should have alluded to. Some time ago at the Physiological Society, in conjunction with Dr. Hill, he showed an animal that had had all four arteries tied, and it was thought naturally that the brain cortex would be inexcitable. On the contrary, it was very excitable, although the bone did not bleed, and although the brain was quite pale. Yet when they stimulated they could get all the movements as easily as possible, and therefore it seemed probable that the excitability had increased; and that, of course, might be a very important factor in connection with this status epilepticus. Moreover Dr. Waller had shown that the nerve was increased in its excitability by the influence of carbonic acid. In the condition of status epilepticus, where there was both anæmia and excessive carbonic acid, these might be the causes why we had this vicious circle established. He gave that as an explanation, but he felt it presumptuous on his part to say anything about it; yet he hoped that time would

enable him to work more fully at this subject, which he considered a very important one.

In answer to Dr. Briscoe, with regard to bleeding, certainly he thought it was often resorted to by physicians, but very often too late. He had seen a good many cases which might have been saved.

Dr. Jones was kind enough to bleed two patients, but one was in a very bad way when she was bled. With the idea that the disease might be due to some mechanical condition, certainly bleeding did seem likely to give some hope, but he thought that the main thing was to stop the fits early. As soon as it appeared that the patient was going into the status something should be done. Each time the patient had a fit the brain became more excitable, and if it was an auto-intoxication that was taking place, of course the poisonous products were accumulating in the blood, so that finally it was impossible to get rid of them, and a fatal result ensued.

The Chairman then called upon Dr. Lord to read his paper upon "The Care and Treatment of Epileptics" (see page 468).

Members afterwards dined at the Café Royal.

SOUTH-WESTERN DIVISION.

The Spring Meeting of the South-Western Division was held at the Grand Pump Room Hotel, Bath, on Tuesday, April 18th. Dr. Aldridge was unanimously voted to the chair, and those also present were Drs. Benham, Morrison, Morton, Lindsay, McBryan, Bullen, Blachford, Barraclough, Davis, Sproat, Babb, Hungerford, Briscoe, Wade, Johnstone, Craddock, Stewart, Stevens, and MacDonald (hon. sec.). Dr. Paul Bush, of Bristol, and Dr. Gordon were present as visitors.

The following were elected members of the Association:—Charles R. Scott, M.B., C.M.Edin., Assistant Medical Officer, Warneford Asylum, Oxford; Reginald C. J. Stevens, M.B., B.S.Durham, Assistant Medical Officer, Devon County Asylum, Exminster; Arthur L. Flemmings, M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer, Bristol City Asylum; Laurance Dudley Parsons, M.B., Ch.B. Edin., Junior Assistant Medical Officer, Cornwall County Asylum; Francis Dudley, L.R.C.P.I. and L.R.C.S.I., Senior Assistant Medical Officer, Cornwall County Asylum.

On the motion of Dr. Wade, seconded by Dr. Briscoe, Dr. P. W. MacDonald was unanimously re-elected Hon. Secretary.

On the motion of Dr. Morton, seconded by Dr. Morrison, Dr. Noott and Dr. Bullen were elected to fill the vacancies on the Committee of Management.

It was decided to hold the Autumn Meeting on Tuesday, October 17th, at Digby's Asylum, Exeter.

A letter from Dr. Turnbull, hon. secretary to the Scotch Division, was read, asking for the opinion of this division as to the payment of the secretary's expenses in attending meetings; and on the motion of Dr. Benham, seconded by Dr. Briscoe, it was resolved that the members of the South-Western Division approve of the principle, and would recommend that the secretaries be paid from the funds of the Association their out-of-pocket expenses (not hotel bills) in attending annual meetings and meetings of Council.

Dr. F. St. John Bullen then read a paper on "Hallucinations of the Olfactory Sense in the Insane" (see p. 513).

Dr. H. Barraclough followed with a paper on "The Incidence of Alcoholism to Insanity, with special reference to Wiltshire." He had collected 482 cases, this number including cases of ancestral intemperance as well as of individual alcoholism. From these it appeared that "ancestral alcoholism" generally produces alcoholic habits in male descendants, rarely in female. "Ancestral alcoholism" was described as producing three effects in descendants: "ill-balanced brain," insanity, epilepsy (the number suffering from the latter is not absolutely large). Of 234 male alcoholics 22·2 per cent. had a family history of intemperance. "Ancestral intemperance" ranked next to hereditary insanity in importance as a predisposing cause of insanity. In Wiltshire it was noticed that during the years

of agricultural depression alcoholism increased, whereas excessive drinking is said to be more prevalent in days of prosperity. With a family history of intemperance mental breakdown occurs earlier in life than in the case of an habitual drunkard without such history, and the recovery rate is higher amongst the former class. Melancholic insanity is generally the sequence of acquired alcoholism, whereas mania is that of hereditary alcoholism. Hereditary intemperance, besides predisposing to insanity, epilepsy, and alcoholism, also predisposes to phthisis, and in a few cases to general paralysis. The speaker also dwelt upon the important part played by unsuitable marriages in the propagation of insanity, and observed that medical men might exert influence for good by advising in such cases. They should be sociologists as well as clinicians and pathologists. The speaker objected to the narrow significance of the term "heredity" in our causation tables. Heredity of insanity was alone implied. The term should embrace such notable predisposing causes of insanity as epilepsy, consumption, intemperance, and neurotic ancestry.

The CHAIRMAN commented upon the practical character of the paper, and remarked that such investigations might be usefully extended to other counties. He was struck with the remark that in Wiltshire alcoholism was not so marked among women as among men, and possibly the difference might be accounted for by the different opportunities which large centres of population gave, which smaller ones did not. Possibly women had more facilities and worse examples in large populations than in small country villages.

Dr. STEWART said it was interesting to compare statistics over a large number of years from such places as Glasgow on the one hand, and Devonshire on the other. Glasgow was a place where spirits were taken in very much larger proportion than either beer or cider. Devonshire, on the other hand, was a county in which there was a comparatively small amount of spirit drinking. They found alcoholic heredity given as a cause of insanity in Glasgow in a much greater proportion than it was in Devonshire. Why was it, he asked, that spirits would produce more insanity, relatively speaking, than cider? He believed it was that in the case of the cider-drinking community they lived more in the open air; and he thought they would find that in Wiltshire and in other agricultural counties the hereditary predisposition of an alcoholic character was small, just in proportion as the population worked out of doors. They could work it off, and did not produce as many insane children in proportion as in the counties where the people were engaged in occupations which kept them within doors. He believed that the number of insane whose parents were topers was comparatively small, and far smaller than people usually imagined. It was a mistake to say off-hand that because the patient's parents were topers, therefore he had become insane. In a great number of cases allowance should be made for a great many other factors. Dr. Barraclough's experience corresponded with his own during the last twenty-three years, in dealing with inebriates, that male alcoholics had oftener the hereditary taint as a cause than females. There was a very interesting point brought out by Dr. Barraclough in his paper, which they hoped to dwell on a good deal in their conversation with their lay friends, and that was how consumption, epilepsy, insanity, and the heredity of intemperance were interchangeable in their effects upon future generations. He thought that during the twenty-three years in which he had been dealing with inebriates he had only had six cases in which there had been epilepsy said to be a direct result of the intemperance of the parents. Another fact which made a great impression upon him was that during all this time he had only had one case of an epileptic fit in his house, though in twenty-five cases he had been told, either by the patients themselves or the friends, that they had been subject to epilepsy before. Those who had had experience of epilepsy in connection with alcohol would probably be very much interested in this fact, and he had assured the friends in the cases to which he alluded that the probability was that when the alcohol was removed there would be no epilepsy.

Dr. BRISCOE said in his own experience he had come across a good many alcoholic cases, and had taken the trouble to inquire into their histories. He had found frequently cases of alcoholic insanity in which the alcoholic history had been transmitted from the parent and generations beyond, and although he did not wish to put his opinion before Dr. Stewart's, he had always been given to understand that alcoholic insanity was hereditary.

Dr. STEWART said he wished it to be understood that he did not at all deny that alcoholic insanity was hereditary; what he wished to suggest was that it far more frequently had as its result some of those other conditions he had referred to, such as epilepsy, or consumption, or some other neurosis.

Dr. MACDONALD added his testimony to the value of the paper. It was particularly interesting to him, because the facts which had been given were so absolutely in agreement with his own. Dr. Barraclough had hit the right nail on the head by saying that the great increase of insanity was probably due to that persistent state of marriage in a limited circle without any interchange of blood. He did not know what could be done to prevent this. Dr. Barraclough rather pinned his faith upon education. He did so himself at one time, but his faith had completely gone. He agreed with Dr. Barraclough in regard to the need for amending their causation tables; as now made up and sent forth they were most unsatisfactory.

Dr. BARRACLOUGH, in reply, referred to the comparison which had been made between the effects of whisky drinking and beer drinking. He thought it quite possible that the brain became more degenerated as the result of whisky drinking, and also at an earlier period. With regard to alcoholism and epilepsy, he quite agreed that if alcoholism could be stopped, epilepsy might be stopped too. As to the causation table, he was glad Dr. MacDonald's views coincided with his.

Dr. SPROUT read a paper upon "Major Operations in the Insane" (see page 446).

NORTHERN AND MIDLAND DIVISION.

A meeting of this Division was held at the County Asylum, Hatton, near Warwick, on the 12th April, 1899.

Members present: Drs. Rutherford McPhail, Miller, S. Agar, Hitchcock, Percival, Bedford Pierce, Whitcombe, Wilcox, and Crochley Clapham (Secretary). Visitor: Mr. O. P. Turner.

Dr. MILLER was voted to the chair, and the minutes of the previous meeting having been read and confirmed, Dr. Crochley Clapham was unanimously re-elected Hon. Secretary of the Division, and the names of Dr. Cassidy and Dr. Miller chosen as those to be recommended to the Council of the Association to fill the vacancies on that body.

The date and place of the next meeting were left in the hands of the Hon. Secretary.

A discussion was then opened on "The Nursing Staff in Public Asylums" by Dr. Rutherford McPhail, of the Derby Borough Asylum.

Dr. RUTHERFORD MACPHAIL, in opening the discussion on "The Nursing Staff of Public Asylums," said his experience referred only to the last eighteen years. During that time he had seen great improvements in various ways—greater consideration for the comfort of the staff, shorter hours, longer leave, better pay, more means of recreation, and above all fairly complete instruction in nursing and care of the insane—since the institution of the nursing certificate of this Association. Although it might be taken for granted that we have much better staffs in our asylums to-day than was the case twenty years ago, we seemed to be no nearer the possession of a settled and permanent staff than was the case then. Indeed, such statistics as he possessed would seem to show that the changes were more frequent now than formerly. The obvious inference was that much more required to be done in this important matter, and as most superintendents had a free hand in the choice of their staff it was for them to suggest the remedy.

He went on to say that if educating one's attendants and nurses made them more valuable to the institution, it had also the effect of making them more ambitious, and illustrated this from his own experience. In the Derby Borough Asylum forty members of the staff had been trained and obtained their certificates during the last eight years; only twelve of these were at present on the staff, three of each six had left for better posts in other asylums, two attendants took up other work, five nurses left to be married, and nine attendants and six nurses had joined

nursing institutions and taken up private nursing. The obvious inference was that we did not make it worth their while to stay, they were able to better themselves, although in his asylum the scale of pay was over rather than under the average, and additional remuneration was given to holders of the nursing certificate.

He next discussed the matter from the attendant's point of view—the irksomeness, the difficulties and disagreeableness of the duties, the insecurity of tenure, and the uncertainty of pension. In his opinion we could only expect to retain a good attendant by giving him the prospect, say after ten years' service, of obtaining the equivalent of 30*s.* weekly, and an amount of weekly, monthly, and annual leave equivalent to one and a half days a week. There were obvious reasons why such long service could not be expected from nurses as from attendants, but in his opinion they had a right to be paid at least as well as nurses in hospitals and infirmaries. He advocated the introduction of ward-maids into the female wards, in the hope of inducing a better social class to take up asylum nursing; this he thought most desirable. He had no experience of female nursing in the male wards of asylums; theoretically it seemed feasible, but there were many practical difficulties. Although he had every sympathy with the complaint as to length of the working day he did not see how it was possible to curtail it. The introduction of the eight hours day, even though the increased expense was got over, would not solve the difficulty. Increasing the number of days off duty seemed at present to be the only feasible course to adopt.

He did not think we went far enough in training the staff—or, rather, that we stopped too soon. He would like, as further developments of asylum nursing, to see some affiliation to general hospitals and the introduction of an honours certificate in mental nursing, to encourage the better qualified of the staff to pursue their studies. In discussing this vexed question of the training and retaining the nursing staff with other asylum medical officers, he found that they all had strong opinions, and his object in introducing this subject would be attained if these views were ventilated. He concluded by suggesting several points which appeared to him as suitable for discussion, and in which he was anxious to obtain the opinion of the meeting for his own information. Some of the points which seemed to him suitable for discussion were the following:

(1) What is our duty in regard to the Association for Asylum Workers? Ought we to encourage our staff to join it or not?

(2) Are we all satisfied with the nursing certificate of the Medico-Psychological Association, or should each asylum hall-mark its own training and issue its own certificate?

(3) Is it better to train your own raw material, or is it equally satisfactory to appoint a proportion of your staff from other asylums?

(4) What is the best type of raw material, at what age should this training commence, and why do so many superintendents find men trained in one or other of the services so unsatisfactory?

(5) Is the introduction of female nursing into the male infirmary wards desirable or feasible?

(6) Should a regular night staff be appointed on permanent duty, or should day and night duty alternate?

(7) Is it a good or a bad principle to pay for special duties, *e.g.* band practices, fire practices, funerals, &c.?

(8) What is the best way of dealing with what might be termed the minor faults of attendants?

(9) In breaches of the seventh commandment should there be one law for men and another for women, as is often apparently the case?

(10) Are criminal prosecutions advisable in cases where one might consider the culprit sufficiently punished by being summarily dismissed?

He supposed all would have strong opinions on these and similar points about asylum staffs, and the ventilation of views, particularly in an informal discussion, ought to be helpful.

Dr. Percival observed that he had not a high opinion of the Association of Asylum Workers, and indeed would be glad to see it non-existent.

Dr. McPhail pointed out that the Association had a membership of 4000.

The Chairman said there appeared to be two ways in which one might look at the question. Was it a secret society to get up opposition, and obtain increases in

wages and various other things in an illicit way, or was it designed to further the knowledge and possibly increase the status of the persons who joined it? If the latter, one could not help seeing that it might be fruitful of good. If, on the other hand, it were a bond of union between a certain class against them (the medical directors) they would naturally oppose it. At that asylum an enormous number of subscriptions were given to it. He fancied the subscribers thought they were going to get 10 per cent. advance by joining it. He thought very possibly before another year or two the Association of Asylum Workers would die a sort of natural death.

Dr. PIERCE said there had been a very good paper in the *Journal of the Association of Asylum Workers* on the hours of workers. It quite impressed him.

In regard to the certificate of the Medico-Psychological Association, Dr. WHITCOMBE said he felt they might discuss the paper from now till next year, and that every one of the points raised in it should be taken up in a very thorough manner. With regard to the certificate of the Association, no doubt it might be improved. The chief matter was in which way it was to be improved. He thought the principle involved in each asylum having its own certificate was utterly bad. It was not, he thought, a good thing for nursing generally to find even hospital nurses with special hospital certificates, and he thought that Association had set a good example in the nursing line by issuing a certificate which should be of value with a very good and thorough examination. That was his feeling about the certificate at the present time.

Dr. CLAPHAM said that the principle of each asylum granting its own certificate was a mistake. The standard between two asylums might differ, and they would have no means of putting a right value on respective certificates.

The CHAIRMAN considered that to disallow an attendant to seek the certificate of the parent Association would be to treat him very unfairly.

Dr. PERCIVAL said there was no doubt great difference in the severity of the examinations at different asylums. To his mind the clinical part of the examination was the most important, and the examiners had not time to take the candidates through that. How much the attendants knew of their real work could be estimated only by the superintendent and medical officers. It seemed to him that a good deal of improvement in the mode of conducting the examination was desirable.

In regard to the question of choosing attendants, Dr. PERCIVAL said in the case of a head attendant it was an advantage to get persons from another asylum, because they came fresh to their duties. Their subordinates found them in the saddle, and had not known them in subordinate positions, and they were therefore able to keep better discipline.

Dr. CLAPHAM said that personally, as a superintendent of a private asylum, he preferred to use raw material. He would never take a nurse from a public asylum. He quite acknowledged that the difficulty was the head nurse. It was a pity to take a head nurse out of one's own asylum from amongst the nurses, because she had not the same sway over her subordinates.

The CHAIRMAN said he was very strongly of opinion that the higher ranks were far better filled up from other institutions. With regard to the appointment of attendants from other asylums, he thought it was rather a cruel thing to taboo anyone because he had come from another asylum.

In respect to the best type of raw material, Dr. PERCIVAL inclined to believe that the majority of superintendents found soldiers unsatisfactory, but his experience was different as regards sailors. He was always glad to get men from the navy. He found them excellent men as a rule.

Dr. WHITCOMBE said his experience was that this was not an optional matter. They had to take what material they could get. At the present time he did not think the class of candidates for attendants in asylums, or even nurses, was anything like so good as it used to be several years ago. As regards the services, he thought the experience was very general that out of the large numbers engaged in asylums a very large proportion failed. He quite agreed that the sailor was the better man, but even with the sailor it was the exception to get a good man. But as regards the quality of the material which they had otherwise to select from, it was entirely a question of locality. He did not think they were likely to get what

he would call first-class attendants until they paid them much better than they now did.

The CHAIRMAN said there was one man who had been left out who was better than some of the other candidates—the handy marine. He was a different type from the others. He (Dr. Miller) had never agreed with those who said that soldiers were not very valuable. If one could get him, the unsophisticated yokel made the best attendant. His committee had already sanctioned an experiment in regard to attendants. The attendants were engaged for three months' probation, and were obliged to present themselves for examination at the end of their second year. If they did not succeed they got no further rise in their wages, and did not get it until they succeeded. Whether this was going to be productive of benefit or not he did not know. It might possibly draw a line between the good and the bad.

In regard to female nurses in male wards, Dr. PERCIVAL said he thought that the general opinion was in favour of having female nurses in the male infirmaries. That seemed to be the fashion. He had not been converted himself. He could not see anything against a man becoming as good a nurse as a woman. He did everything else better, even taking a woman at her own trade. All the best milliners were men, and so were the dressmakers, and it seemed to him that nursing had been relegated to women merely for convenience. No doubt cheapness had a good deal to do in keeping up the practice. He would just as soon be nursed by a man as by a woman.

Dr. WHITCOMBE said he had had experience of female nursing in the male wards for thirty years, and found it of every possible benefit, so much so that he would like a female in every male ward. The difficulty was to obtain married people without families who would go into the male wards.

The CHAIRMAN: You are alluding, of course, to the infirmary wards in an asylum, where the old people and sick are perhaps congregated together?

Dr. WHITCOMBE: Both amongst them and the idiots.

In respect to day and night duty, the CHAIRMAN said he was of opinion that a permanent staff for day and night was the best. He was very strong on one point, viz. that their night staff was inadequate if the nurses were to look after the people anything like fully. They had at Hatton an uncommonly large night nursing staff. He was not going to say the work was done any better, but he thought the principle held good that the care of the insane at night was not quite sufficiently looked after. In their infirmary wards there might be thirty or forty people, and he supposed 50 per cent. required a lot of looking after during the night. He hardly thought one woman could possibly nurse those people during the night, presuming they had anything the matter with them.

Dr. WHITCOMBE said the day staff was probably much larger than the night staff. The nurses, he thought, rather preferred night to day work. Some of his oldest attendants certainly were on the night staff, but there was this great advantage about it, they were married people and lived out, and latterly he had allowed his night nurses to live out also, and he found it was answering very well.

Dr. CLAPHAM: Do you get fewer wet beds as a result of increasing your night staff?

The CHAIRMAN: I unhesitatingly say the increase of the night staff has improved the condition of the patients.

As regards extra pay for special duties, the CHAIRMAN said it was the usual plan to pay extra for band-work, funerals, and post-mortems. Whether the principle was good or not he was not prepared to say.

Dr. PERCIVAL said he had always had a very good band, and they never paid their men anything extra; but then the band practised at night. If they were not at band practice they would be in the wards.

Dr. WHITCOMBE said he had always thought the principle of paying for special duties was a bad one.

The CHAIRMAN said he was glad to hear Dr. Percival was able to retain good bandsmen without paying them. He wondered he was able to do it. He believed he was right in saying that the Lancashire asylums paid their attendants more liberally than they did in the south. He found in a small asylum that the question of keeping up the band was a rather difficult matter. He had taken a practical

interest in it. The conductor was not paid, but the bandsmen were. They paid for their practices, but not for the performances.

The last three points raised in the paper having been briefly discussed, the CHAIRMAN said he thought they were all agreed that they had had a most interesting paper from Dr. Macphail, and it had certainly given rise to a very useful discussion.

Dr. WHITCOMBE moved a formal vote of thanks to the reader of the paper, which was carried.

Dr. WILCOX, A.M.O., of the Warwick County Asylum, followed with a paper on "Some Cases of Insanity treated by Various Animal Extracts."

Dr. Wilcox recorded some cases of insanity which he treated with the following extracts, namely, ovarian, cerebrinin, didymin, and thyroid. The dosage of each of these preparations was at the onset 15 grs. daily, and then was increased by 15 grs. each day until 60 grs. had been given. The extracts were given in the form of tabloids, each containing 5 grs.

(*a*) The five cases in which *ovarian extract* was used were female patients who, apart from their insanity, also suffered from amenorrhœa prior to or subsequent to their admission into the Warwick County Asylum.

In the first case, a subject of mania followed by dementia, aged 19 years, within a few weeks after the administration of this extract marked signs of mental improvement were evident; within a month there was a slight menstrual flow; and six months after this the patient was discharged as "relieved," and had since then gone on steadily improving mentally and physically.

In the second case, a subject of acute mania, aged 18 years 13 days, after the commencement of the treatment menstruation began again; after this the patient rapidly got better, and finally recovered.

In the third case, a subject of acute melancholia, aged 20 years, menstruation re-established itself, and the patient is at the present time steadily improving.

In the fourth case, also the subject of acute melancholia, aged 33 years, menstruation became regular again, and at the same time there was very marked mental and bodily improvement.

In the fifth case, a married woman aged 43 years, who at the time of treatment was also suffering from acute melancholia, the ovarian extract produced no effect.

In two of these cases Dr. Wilcox observed a rise of temperature and an increased pulse-rate after the administration of this extract.

(*β*) The *cerebrinin preparation* was given to four female epileptics, but one of these became excited and developed hallucinations of hearing, while another one became acutely maniacal, and the number of her fits increased. Its action on the remaining two was also unsuccessful.

(*γ*) *Didymin* was administered to ten male epileptics, but with no success. In nearly all of them it was followed by mental disturbances, *e.g.* excitement, quarrelsomeness, and hallucinations of sight and hearing to a greater extent than before treatment. Subsequent physical reaction was not marked; in only one case did the temperature reach 100° F.

(*δ*) A few cases who were the subjects of further melancholia, acute mania, or dementia were treated with thyroid extract. One patient showed signs of distinct improvement, but unfortunately this was only temporary. The remaining cases also derived no benefit from its administration.

Dr. Wilcox believes that in the insanity of adolescence the results are sufficiently encouraging to warrant perseverance in the ovarian extract treatment, and he hopes to be able to record again some more data on this subject.

Dr. WHITCOMBE said that, although the subject was one on which he had not had any experience, it struck him that this work upon animal extracts was of very great interest, and led up to what might be very useful work. The success noted by Dr. Wilcox would lead him to turn his attention to the animal extracts.

The CHAIRMAN said he thought there would be no doubt that the utility of some of the animal extracts had been somewhat overrated. He heard a very interesting paper on the use of thyroid, and could not help being struck with the wonderful results apparently accruing from this treatment. But when they came to try it at Hatton, although on the class of cases recommended under exactly similar clinical conditions, they did not meet with the success that others had done. So far as the ovarian extract was concerned he could thoroughly bear out what

Dr. Wilcox had said. He had been very sceptical as to the benefits obtained from the use of this extract, and really at the time they used it tentatively, more on account of the man who recommended it than for any other reason. But after the use of it, especially in the case of Miss M. E. P—, the case Dr. Wilcox referred to, and also of young girls, he was quite sure the drug was one of great value.

Dr. AGAR asked if any similar treatment had been attempted on male patients.

Dr. WILCOX replied in the negative.

Dr. AGAR said he always felt that cases of young women were more hopeful than those of young men in a similar stage. He was not disparaging the excellent results Dr. Wilcox had obtained. One would like to see whether any similar percentage of improvement would take place in the adolescence of males.

Dr. WILCOX: What tabloid would you suggest?

Dr. AGAR said he made no suggestion, but it seemed to him that failures in the male sex were more frequent. He would like to hear very much of such experiments, and they would be interesting to many of them present.

Dr. CLAPHAM said the extracts had been very much used in general hospitals, but were not now used so much as formerly. They used them in the Royal Hospital, Sheffield, but did not have the results they expected. But certainly Dr. Wilcox's results were very encouraging as regards ovarian extract.

Dr. PIERCE said in the few cases he had tried he had drawn a number of blanks. In one case of chronic mania a most surprising lucid interval followed, but no amount of dosing availed to keep the patient well. Thyroid was used in this case. So he must say the use of animal extracts in his experience had been unfortunate, but this paper would certainly lead them to try ovarian extract again.

On the motion of Dr. WHITCOMBE, seconded by Dr. CLAPHAM, a vote of thanks was passed to the reader of the paper.

Previous to the meeting the members were shown round Stratford-on-Avon by Dr. Wilcox, and afterwards driven to Hatton.

Dr. Miller kindly entertained the members at dinner after the meeting, and a vote of thanks was passed to him for his hospitality as well as for presiding at the meeting.

SOUTH-EASTERN DIVISION.

The Spring Meeting of the South-Eastern Division was held at the Kent County Asylum, Chartham Down, near Canterbury, on Wednesday, April 5th. Present—Drs. Fitzgerald, Kidd, Mould, Fox, T. S. Tuke, Moody, E. W. White (Hon. Sec.), Gardiner Hill, Bower, A. S. Newington, Everett, Beach, and Maclean. Visitors—Messrs. Harness, Frend, and Pugin Thornton. Before the meeting a visit was paid to the asylum and grounds. Dr. Fitzgerald kindly entertained the members at lunch. At 2.30 p.m. a meeting of the Divisional Committee was held, and at 3 p.m. the General Meeting. Dr. Fitzgerald was voted to the chair. The minutes of the last meeting having been fully reported in the JOURNAL of the Association were taken as read and confirmed.

Dr. Ernest White was unanimously nominated for the post of Hon. Secretary to the Division for the ensuing year. Dr. White, in accepting office, agreed to do so upon the understanding that he should retire at the end of twelve months, as he had a strong conviction that they should elect a secretary who had been recently more actively in touch with the assistant medical officers, from whom they had expected many papers, which unfortunately had not hitherto been forthcoming.

Drs. Gardiner Hill, T. S. Tuke, and Everett were elected to fill the three vacancies created by ballot upon the Divisional Committee of Management in place of Drs. Swain, Newington, and Boycott.

Drs. Percy Smith, Stanley Elliot, and C. T. Ewart were nominated for the probable vacancies on the Council, having been proposed by Dr. Bower, and seconded by Dr. Beach.

A letter was read from the Secretary of the Parliamentary Committee drawing attention to the fact that the discussion upon the duration of the Urgency Order

had been closed by the Annual Meeting in July last, and the Secretary was instructed to explain to the Council that the discussion at the Divisional Meeting upon this subject arose from the fact that the October number of the JOURNAL had not been delivered to members on the 10th of that month, when the Autumn Meeting was held. They were therefore in ignorance of the decision already arrived at. The secretary informed the meeting that the Lunacy Bill, 1899, was not yet to hand, but he had reason to believe it would only differ from that of 1898 by the introduction of a clause upon Incipient Insanity.

Upon the invitation of Dr. Hyslop the Autumn Meeting of the Division was fixed to be held at Bethlem Hospital during the month of October. The Chairman then called upon Mr. Allan Maclean to read his paper.

Mr. MACLEAN believed that it is generally admitted that the Lunacy Act of 1890 had not been of much advantage. Its provisions were cumbersome and of doubtful efficacy. He proceeded to give his views as to the present method of inspection of asylums, registered hospitals, licensed houses, &c. He considered that only three of the commissioners—the medical, that is—were by their training and experience qualified to appreciate the conditions which alone make an inspection effective. The Lunacy Act did not contemplate any but legal qualifications in the legal commissioners. Besides the visits by the commissioners there are also visits undertaken by justices and by the Lord Chancellor's visitors, but chancery patients are few and far between, and the inspection of justices is valueless from their want of skill. Mr. Maclean considered that the two days which, as a rule, are set apart for the inspection of most county asylums by two of the commissioners are not sufficient, for he maintains that the medical gentlemen alone could not possibly give full justice to the inspection of say 400 patients, and much less so the legal gentlemen. In conjunction with this the county asylums and registered hospitals are only visited once a year. Of what use and for what purposes are these inspections? The licensed houses certainly receive visits twice a year, and once every two months in the metropolitan district. It was true that all these institutions had their own committees, but he was not aware that any members of these committees had any special training in the treatment of insanity.

Amongst the many objections to the Act of 1890 was the cumbersome machinery by which alone a case can be put under care and treatment; for he maintained that it should be as easy to place an insane patient under care and treatment as to send any ordinary patient to a general hospital, and also equally easy to have him removed. On presentation of petition and medical certificates the judicial authority might, in his discretion, see and examine the patient. This was left entirely to him: most frequently he said he knew nothing about it, and declined; but some judicial authorities asserted that they were quite as competent judges of insanity as medical men, and he had known cases where their consent to the removal of a pauper patient had been refused because they considered their judgment superior to that of the medical man. So that in effect this inspection by the judicial authority was either useless or rendered the deliberate judgment of qualified professional men inoperative. If the patient had not been seen by the judicial authority a notice must be given to him (the patient) of his right to see a justice. This was either useless if the case were an acute one, or harmful if mild.

The patient had to be seen by the medical officer to the justices, in the case of licensed houses within one month of reception. This length of time would give ample opportunity to an unscrupulous proprietor to work all the evils which had been described from time to time by novelists and others.

He had described the amount of inspection received by these various institutions, and it would be seen at once that it must be almost entirely perfunctory, however anxious the commissioners might be to make it thorough. What could be the possible use of inspecting lunatic asylums at intervals of six and twelve months? The remedy he proposed was as follows:

Instead of three commissioners (for he maintained that there were only three skilled commissioners in lunacy) a mental department should be instituted having inspectors resident in different parts of England, each having a district allotted to him. These inspectors should be selected from qualified medical practitioners who have had proper and sufficient training in the larger institutions for the insane, and they should devote the whole of their time to the duties of their office. These inspectors should have the powers of the present commissioners, and be in a

position to discharge any patient if there should be occasion to do so. Also instead of the petition and order as at present, the certificate of two medical practitioners should be all that is necessary to procure the admission of a patient into any institution. The manager should at once send a notice of admission to the inspector of the district. The inspector should, with as little delay as possible, visit the patient. It should also be the inspector's duty to make frequent and unexpected visits to the institution in his district. He went on to say that it was notorious that there are a large number of single patients under control all over England in private houses, who are not reported, and consequently not inspected, and who may be ill-treated, and that a resident inspector would, no doubt, have a great opportunity for finding out such cases. By dividing the country into districts, according to its insane population, the number of inspectors which would be required for the proper working of a scheme would be arrived at.

Mr. Maclean, in conclusion, added that he has not the slightest intention of attacking the gentlemen who now so ably fulfil the duties of their office as commissioners. It was the system, not the individual, that he was attacking.

Dr. Bower opened the discussion by thanking the author for his paper. Mr. Maclean possessed considerable experience in public and private asylums, and in addition he had for several years been practising at the Bar. He was therefore able to look at the subject from a very different standpoint from their own, and it came all the stronger from him when he stated that medical commissioners were the only real commissioners. Upon that point he (Dr. Bower) offered no opinion. He thought Mr. Maclean's scheme an exceedingly good one, and wished it could be carried out, but was afraid it was slightly Utopian, especially the part which related to the placing of patients in asylums. He (Dr. Bower) thought that probably the stringency of the present regulations of asylums would in the end tone down. Then as to the inspection of asylums, Dr. Maclean remarked upon the feeling of the newspapers in regard to private asylums. His own impression was, from looking at the papers, there was as much attention given to public as to private asylums. He was perfectly certain that all private asylum medical officers he knew were willing to have much more medical inspection of the character suggested by Mr. Maclean, by commissioners who had special experience in lunacy work as district inspectors. There were already medical inspectors appointed by Quarter Sessions, whose duties were to visit every private patient admitted into any licensed house within a month after his or her admission. He thought Mr. Maclean's suggestion that the district inspectors to be appointed by his scheme should visit forthwith was very much better, because under the present arrangements the patient has, during the month after admission, had time to get somewhat better, and certainly to get much more clever in concealing his mental condition, and has not had time to appreciate the benefits conferred upon him by being taken care of in an asylum. He thought Mr. Maclean was inclined to give perhaps a little too much power to the district inspector. Dr. Bower thought sometimes there might be some inconvenience if there happened to be some little personal feeling between the district inspector and the officers of the asylum. He thought Mr. Maclean had put his suggestion in a very small compass and very clearly, and in such a way as to elicit an interesting discussion.

Dr. Mould differed somewhat from Mr. Maclean when he said licensed houses had only two visitors during the year. As a matter of fact, in the metropolis they had eight visits during the year from commissioners, and the registered hospitals had two visits a year instead of one visit, with which Mr. Maclean had credited them. Dr. Mould observed that in a year or so the legal commissioner was as good as the medical commissioner. He, for one, would as soon have a lawyer for a commissioner as a hospital physician; he, in fact, preferred to see a legal commissioner.

Dr. Beach said in all these cases there was a great conservative feeling in England, and he thought they would have to wait a little before they carried out Mr. Maclean's suggestion. Dr. Beach was very much with him as far as increase in the number of commissioners was concerned, although he could not quite think it would be any use appointing twelve district commissioners. Of course he knew that was only a suggestion by Mr. Maclean. The only question was whether they would be able to find men who were sufficiently acquainted with the

subject outside the superintendents in England, who would be able to efficiently inspect the asylums. Dr. Beach remembered some years ago he had asked the opinion of a leading asylum physician on the subject, and it appeared to him that commissioners as commissioners should be abolished, and inspectors appointed instead, who should inspect the asylums, and these inspectors should have certain parts of the country to inspect, or if they could not get that carried out, then it would appear to him (Dr. Beach) that the alternative was to see whether it was possible or practicable to increase the number of physicians they had now. He thought most of those present that day were agreed that the number of commissioners, as at present fixed, was far too small for the great number of asylums to be inspected. He was rather doubtful whether district commissioners were very desirable, or whether they would be a success.

Mr. MACLEAN, in replying to the discussion, said he would like to say with regard to the remarks that had been made respecting the Quarter Sessions, when he was the proprietor of a private asylum the medical inspector did not come near him for six months, which he regretted very much; and when he did come the visit was an absolutely perfunctory one, and he came in and walked out again without asking a single question; that was about the extent of the visit. As for the matter of discharging the patients forthwith, what he meant to say was that the inspector should have the power to discharge a patient if the occasion required. He could not agree to legal commissioners in preference to hospital physicians, because the legal commissioners had to learn their work after they had been appointed, which seemed to be a bad system when they had men who had been medical officers who had the qualifications for commissioners.

The Hon. Secretary (Dr. E. WHITE) then read a paper upon "Epilepsy associated with Insanity." Dr. White premised by saying that he had hoped some assistant medical officer would have come forward with a paper. He had sent out 180 post-cards soliciting papers, but had not obtained one, and therefore he had had to fill the gap himself.

Dr. White's paper and the discussion thereon are unavoidably held over.

A vote of thanks was given to Dr. Fitzgerald for presiding, and for the facilities afforded the meeting.

Members dined together at the County Hotel, Canterbury.

IRISH DIVISION.

A meeting of the members of the Irish Division of the Association was held at the College of Physicians, Kildare Street, Dublin, on Saturday, April 1st, 1899. The following members were present:—H. M. Cullinan, Richmond, Dublin; W. R. Dawson, Finglas; J. O'C. Donelan, Portrane, Dublin; Thos. Drapes, Enniscorthy; H. Eustace, Glasnevin; Arthur Finegan, Mullingar, Secretary for Ireland; J. Mills, Ballinasloe; D. F. Rambaut, Richmond, Dublin; G. Revington, Dundrum; and C. Norman, Past President, who occupied the chair.

The following were elected ordinary members of the Association:

1. Gilcriest, Thomas, L.R.C.S.I., assistant medical officer, Sligo District Asylum.

2. Grogan, Amelia Gertrude, M.B., B.Ch., B.A., and B.A.O., junior assistant medical officer, District Asylum, Mullingar.

3. Leeper, Richard, F.R.C.S.I., resident physician, St. Patrick's Hospital (Swifts), Dublin.

4. Rainsford, F. E., M.B. and B.A., T.C.D., resident physician, Stewart Institute, Dublin.

In the absence of Dr. Gordon (Mullingar) the secretary moved a resolution standing in Dr. Gordon's name, on the subject of the nursing of the insane in the Irish workhouses.

Dr. Finegan, having spoken for Dr. Gordon, explained the circumstances which gave rise to this resolution. The Irish Local Government Board required carefully trained and certificated nurses for the care of the sick. Properly so. The Local

Government Board had refused to accept as nurses for the sick women who had been trained in asylums and had received the certificate of their association. But the care of the insane was a very special branch of nursing, and by a parity of reasoning it seemed to the proposer of this resolution, and to the speaker, that in workhouses where lunatics had to be attended there should be nurses specially qualified in that business.

Dr. DONELAN objected only to the resolution because it might be taken to imply that lunatics could, with some slight modifications of the present system, be properly accommodated in Irish workhouses. The speaker thought the public should rather be taught to understand how unsuitable workhouses were at all for the accommodation of the insane.

Several members spoke on the present lack of proper attention on the insane in workhouses.

The CHAIRMAN reminded the meeting of the vigorous paper on the condition of the insane in Irish workhouses contributed to the annual meeting in Dublin, in 1894, by Dr. Nolan, whose absence to-day he regretted. The members will have also noticed the strong language recently used by T. W. Russell, M.P., Secretary to the English Local Government Board, with regard to the state of the lunatic inmates of the North Dublin Workhouse. To the speaker it seemed remarkable that in these days, when the public were loudly appealed to on behalf of paupers, criminals, epileptics, &c., so little sympathy was shown with the condition of the miserably neglected lunatics and idiots in workhouses. He thought the Association was bound to give any help it could in bettering their condition, and therefore urged the adoption of the resolution.

The resolution, with certain verbal alterations, was eventually adopted in the following form :

" Inasmuch as the Irish Local Government Board has declined to recognise the holders of the nursing certificate of the Medico-Psychological Association as being trained nurses within the meaning of 58 (2) *a* II of the Local Government Act, and deems them ineligible to officiate as nurses for the sick poor in union workhouses, it is, in the opinion of this Division of the Association, desirable that as long as the insane are retained in union workhouses, attendants on the insane in such workhouses should be qualified by the acquisition of a certificate of proficiency in mental nursing, equal in efficiency to that considered necessary for the nursing of the sick."

The secretary was instructed to forward copies to the Irish Local Government Board and to the inspectors of lunatic asylums.

Drs. W. R. DAWSON and D. F. RAMBAUT contributed a paper on the " Ophthalmoscopic Changes in General Paralysis." Considerable attention has already been paid from time to time to the condition of the fundus oculi in general paralysis, but the conclusions as to the proportion of cases in which morbid changes are found are curiously conflicting. It is almost certain, however, that the percentages given by the earlier observers are too high, and later observations, such as those of Wiglesworth and others, show that the usual prevalence is about 17 to 18 per cent. Leaving simple anæmia and hyperæmia aside as being of doubtful pathological significance, the changes in the optic nerve which have been described are—

(1) A low form of neuritis, characterised by slight hyperæmia and blurring of the margins of the disc.

(2) Rarely a well-marked neuritis of the ordinary " choked disc " type.

(3) Atrophy of the disc shown by pallor, most marked on the temporal side. According to Lawford, in the characteristic atrophy of G. P. there is blurring of the disc, not the abnormal sharpness of the " primary atrophy," such as that of tabes. Whether the atrophy in G. P. is really primary, or is secondary to slight inflammation, is a moot point.

As regards the retina, Magnan is quoted as having observed a grey or white line along the vessels. This, which is due to a sclerosis of the vessel wall, is generally believed to indicate a bygone retinitis. A condition first described by Klein, under the name of retinitis paralytica, is said to be indicated by loss of transparency of the retina and papilla, and blurring of the margins of the latter, with varicosities of the arteries and more rarely of the veins, but does not seem to have met with general acceptance, though some observers describe it as very frequent in G. P.

Failure of sight is stated to be very rarely complete even at a late stage in the disease ; but, on the other hand, some degree of blindness may be a very early sym-

ptom, and in fact may precede the other symptoms by months or even years. Most cases showing such symptoms are said to give evidence of spinal implication.

The following observations were made at the Richmond Asylum on thirty unselected cases of G. P. (the only ones in which examination was found possible). In only one was the patient a female. Thirteen cases of diseases resembling G. P. were also examined, and will serve as a control. They included eight of alcoholic dementia, one of congenital weak mind, and four of paranoia.

The cases of G. P. were, with two exceptions, all in the pronounced stages of the disease, but they presented a considerable variety both in mental and physical symptoms, and we believe them to be fairly representative of the different clinical types. The number of these cases in which morbid appearances were found is rather larger than the average of recent observations, as eight cases out of the thirty (26·6 per cent.) showed more or less distinct changes; while in some seven more doubtful appearances were found, which may possibly have been morbid. Such slight phenomena are very difficult to decide upon.

Of the eight cases, three showed symptoms of slight neuritis only, consisting of some redness of the disc, with indistinctness of margin, especially on the nasal side. In one case this appearance was found in the left eye only. In one case the vessels were large. In two of these cases there was a certain history of antecedent syphilis, and one was certainly alcoholic.

The female case showed pronounced papillitis on both sides, the discs being much blurred and very red. Both syphilis and alcoholism had been present. The case was remarkable as an instance of the rare occurrence of Charcot's joint disease in G. P., both knees being severely affected.

In the remaining three cases there was pronounced optic atrophy, the discs being white, and sight completely lost in two cases, reduced to perception of light in the third. In one of these cases only the right eye could be observed, as the left had been destroyed by an old accident some years before the patient came under observation. This case is particularly interesting as being one of those in which affection of sight from optic atrophy was among the earliest symptoms of the disease. Three months before his admission to the asylum he had consulted Dr. Swanzy at the National Eye and Ear Infirmary, who found optic atrophy, and, as there was also Argyll-Robertson pupil and at times slight affection of speech, diagnosed incipient G. P., a view which has been fully verified. Another interesting point is the manner in which the ocular lesion determined the form of the delusions. In the earlier stages he saw spiders, white skeletons, moving objects, crabs, and different coloured mosses. Later he complained of fluff, flies, and worms being thrown into his eyes, and then of buildings being erected at the back of his eyes which blocked out his vision. His general tone of mind was depressed and suspicious. There was no history of syphilis and no alcoholism. One of the other atrophic cases was syphilitic and alcoholic. One case showed reddish, ill-defined discs with large and tortuous vessels, indicating slight neuritis, probably chronic; and also white lines along the vessels. Two of the eight cases showed Argyll-Robertson pupil, but one of these only in the left eye, the right showing total iridoplegia. One other case showed total iridoplegia in both eyes.

In seven cases the knee-jerks were abnormal, being increased in four and diminished in three. The remaining was that of Charcot's disease, and could not be tested. The condition of the reflexes, therefore, afforded a certain presumption of spinal mischief. Romberg's symptom was not observed in any of the cases. They had never observed the varicosities of the vessels described by Klein.

Of the thirteen control cases only two showed indications of abnormality; in one case the margins of the discs were indistinct, in the other the discs were blurred, vessels large, and, on the right side, arteries tortuous.

In conclusion the authors ventured to think that these observations were, at all events, sufficient to show the desirability of an early ophthalmoscopic examination in cases of suspected general paralysis.

Dr. Finegan described the case of a man admitted into Mullingar Asylum in whom the diagnosis was doubtful. There was no history of syphilis. He had exalted delusions. There was a decided diminution of the reflexes, and he had a general congestion of the conjunctivæ, which led the speaker to make an ophthalmoscopic examination of the discs, with the result that he found they were somewhat blurred. However, he had only been in the asylum a few months when

he showed marked exalted delusions, and in the course of two years he died. During the whole course of his disease he had congestion of the conjunctivæ, associated with the blurred discs.

The CHAIRMAN said one case to which Dr. Dawson and Dr. Rambaut referred was an extremely interesting one, in which the earliest delusions seemed to have originated in delusive interpretation of phenomena arising from the patient's failing vision. He thought that moss, cobwebs, nets, &c., were constantly falling before his eyes. Subsequently he became suspicious, and said that Dr. Swanzy, the well-known oculist (who had seen him and early diagnosticated the case correctly), had put out his eyes. Later, other organised persecutory delusions appeared, and led to that result—comparatively rare in general paralysis—repeated attempts at suicide. In this case, by the way, there was a distinct history of syphilis, and the speaker expressed a strong opinion that such a history was rarely absent in cases of general paralysis. The speaker went on to say that Drs. Dawson and Rambaut's cases, which were the subject of a paper read at the Edinburgh meeting of the British Medical Association, were commented on in an Italian journal by Dr. Gucci, who said that the control cases were not selected "with a sufficient absence of preconception"—a criticism which the speaker did not quite understand.

Drs. DAWSON and RAMBAUT briefly replied.

Dr. DRAPES read a paper on "Punitive Measures in Asylums" (see p. 436), which was discussed at some length.

Dr. RAMBAUT read a paper on "The Röntgen Rays in Asylum Practice," and showed numerous photographs and negatives of fractures, bone diseases, and osseous deformities occurring in asylum practice. He drew attention to the special value of skiagraphic aid in ascertaining the presence and position of foreign bodies in the insane and in the diagnosis of the injuries of the insane, who are often unable to give reliable information about their subjective symptoms. He referred to the opportunities which skiagraphy affords of studying and recording the bony states in congenital and other deformities, which hitherto it has only been possible to study after death.

In referring to fractures of ribs, he mentioned that the thorax was examined on several occasions in the Richmond Asylum, both in the living and in the dead body, with the fluorescent screen and photographic plate, and that the results in the case of the living were so far disappointing. With the fluorescent screen it was quite possible to see the clavicle and scapula, and to get a general view of the ribs, but it was extremely difficult to examine a given part of a given rib, because the shadow of the posterior portion of the ribs (which is more opaque than the anterior) crosses at an acute angle the anterior portion, and confuses the picture; again, the ribs are comparatively translucent, and are in a constant state of movement necessitated by respiration, while the shadows of the vertebræ, heart, and sternum combine in obscuring the shadow of the ribs, especially when an attempt is made to examine the ribs about their middle with an oblique illumination. The dead subject, especially when emaciated, presented little difficulties, and even the cancellous tissue of the ribs could be made out.

Drs. DRAPES, MILLS, REVINGTON, and the CHAIRMAN spoke, the last on the service which he had hoped skiagraphy would be in the detection of injuries about the chest, to which, as they all knew, the insane are so liable. This hope had led them at the Richmond Asylum to experiment largely on this method of exploration. He still hoped that with improved modes of skiagraphy it might be possible to obtain an early and ready way of solving the question, often now so difficult, of whether ribs were broken or not.

Dr. RAMBAUT also communicated a paper upon a "Case of Insane Homicidal Impulse" (see p. 558).

Further papers were contributed by Dr. EUSTACE on "Paranoia," and by Dr. CONOLLY NORMAN on "Emphysema of the Subcutaneous Areolar Tissue occurring in a Case of Acute Mania."

The report of these is unavoidably held over.

QUEBEC MEDICO-PSYCHOLOGICAL SOCIETY.

At a meeting of the Medico-Psychological Society of Quebec on October 15th, 1898, Dr. Chagnon read a paper on the "Influence of Traumatism on the Mental State."

Dr. CHAGNON said that incidental maladies and traumatism befalling the insane in the course of their mental affection are sometimes of good omen to the alienist physician, inasmuch as they lead to a speedy cure, which otherwise would have been slow to come, or perhaps would not have been brought about. He had had under observation at St. Jean de Dieu Asylum a case which thus terminated in a cure after two years' duration.

Summary.—Hugh James K—, aged 25 years, state of stupor, penetrating wound of the abdomen; cured.

The patient was admitted to St. Jean de Dieu Asylum, Long Point, on October 19th, 1896. There was never any hereditary taint of insanity in his family, and he himself did not show any physical stigma of degeneracy.

He had been a conductor on the street railway cars for several days, when a slight accident happened to the car in his charge. Though the accident was of little importance, it was nevertheless sufficient to affect his mental equilibrium. This accident happened about fifteen days before he came to the asylum.

On admission he showed a slight trace of maniacal excitement, which shortly afterwards gave place to stupor, during which it was sometimes necessary to have recourse to forced means of nutrition. This stupor did not, however, continue all the time; it was broken by maniacal attacks, more or less intense. Some ambitious ideas showed themselves at times, and hallucinations of hearing rendered him impulsive; he gradually fell into dirty habits.

On the morning of June 13th, 1898, he made an attempt to commit suicide. He drove a knife into the epigastric region. The course of the wound was from right to left, following the rectus muscle for the space of about half an inch, and then passing into the "linea alba" by a slightly oblique opening measuring one inch. Laparotomy was at once performed. No perforation was found. A superficial layer of the omentum only was cut off, and exhibited slight hæmorrhage from a small vein. The parts were stitched, and the abdomen was closed.

Whilst they were making the deep sutures the patient showed signs of asphyxia, stoppage of respiration, and was in imminent danger of death. Rhythmic tractions of the tongue, after Laborde's method, brought the patient to himself. The result of the operation was excellent,—no rise of temperature, no suppuration. This attempt at suicide, which was the first, was due to hallucinations of hearing.

During the first week after operation he fed himself very imperfectly, and wished to die. Forced feeding was in contemplation, when all of a sudden the patient decided to take everything which was offered him. From this moment his convalescence progressed rapidly, and on the 31st of August he was able to return to his family.

Dr. CHAGNON also communicated a paper upon "Two Cases of Psychical Troubles after Operations."

He had had the advantage of observing two cases of psychical troubles after the performance of operations, one following amputation of the breast, and the other after the amputation of a leg.

Obs. 1. *Summary.*—Madame D—, æt. 34; sarcoma of the breast, operation, acute mania.

Madame D— was admitted to the Notre Dame Hospital, Montreal, on March 26th, 1891. She came to undergo an operation for sarcoma of the breast. The operation was successfully performed on the morning of March 28th. The following night she had little sleep. Slight agitation during the day of the 29th, absolute insomnia during the night of the 29th, and at length a crisis of acute mania on the 30th. This state continued; she became so agitated and so noisy that it was decided to send her to the asylum on urgency. She was admitted to St. Jean de Dieu on the 3rd of April, and died there on the 7th of April from acute delirium. We learned from her husband, what she herself had not declared, that shortly after her marriage, which took place three years before, she showed signs of

maniacal excitement for a short time, and that one of her sisters was out of her mind. It was impossible to have any information about her family history.

Obs. 2. *Summary.*—Mrs. F—, æt. 54, arthritis of the tibio-tarsal articulation, amputation of the leg, circular insanity.

Mrs. F— was admitted to Notre Dame Hospital on June 5th, 1894, to be treated for arthritis of the tibio-tarsal articulation, of about five years' standing.

Hereditary antecedents.—Her father died at seventy-seven years of age from senile debility. Her mother died at the age of sixty-eight years from the "grippe." She had seven brothers, of whom four died young; the three living brothers are in good health. Three sisters are also in good health.

Personal antecedents.—Mrs. F— had eleven children and one miscarriage. She never showed any nervous trouble. About eighteen years ago she noticed that a "tumour" was growing on the dorsal surface of the foot. She had it removed six years later. The wound did not heal, a necrosis of the bone followed; a fragment of the necrosed bone was taken away. Some improvement followed, but the disease reappeared, and she was then admitted to the hospital. At this period the patient was excessively debilitated, and an operation was the only means of saving her life.

Amputation of the leg was performed at the inferior third. Secondary hæmorrhage was very abundant. She left the hospital on the 3rd of July.

On leaving the hospital Mrs. F— was very anæmic. Two or three months afterwards she began to show symptoms of melancholia. "She saw everything in black; everything appeared to her as big as mountains; she was to fall into poverty." This state of melancholia would begin towards evening, and continue until the following evening, and was succeeded by a period of mental sur-excitation lasting the same length of time.

The melancholico-maniacal fits succeeded each other regularly from the time they first began, and were not followed by lucid intervals.

In the first case there was an anterior attack of insanity, collateral, and perhaps direct heredity, inasmuch as the parents were unknown, and the effect of the traumatism was only to bring forth mental troubles in a brain already prepared.

The patient who is the subject of the second observation did not show any neuropathic antecedent, hereditary or personal. It is not possible to appeal to any preoccupation, the dread of the operation, or the fear of death. She knew that the operation alone could save her life, and she decided courageously to undergo it. The results of the operation were excellent, the recovery was rapid. It is necessary, then, to conclude that the operation alone was sufficient to bring forth the mental troubles.

Dr. Chagnon was therefore of the opinion that these operations alone were sufficient to bring forth the respective mental troubles.

At the same meeting Dr. VILLENEUVE communicated a paper on "Alcoholism and Responsibility," dealing with the social and administrative aspect of the question. In order to illustrate his paper he brought forward the following notes:—L. T—, æt. 36, married. Family history: father temperate; paternal grandfather and a paternal uncle suffered from alcoholic intemperance. Also a paternal aunt died in an asylum from an attack of acute mania. This aunt had frequent attacks of mania of great intensity, resulting from the most trivial causes, such as loss of sleep, contradictions, &c.

Patient's history.—At college he was considered a bright student, and notwithstanding a propensity for laziness he got along well in his classes, because it required little effort on his part to learn. But he was shunned on account of his sullen temper, and was generally looked upon as a badly balanced mortal. After leaving college he always fulfilled with intelligence, when sober, the duties confided to him, and was polite, industrious, intelligent, and possessed good business qualities.

Previous to his marriage, six years ago, he fell into alcoholic habits when living in his father's house, but without the knowledge of the latter. By degrees his drunken bouts became more numerous, of longer duration, and occurred nearly every month. He tried to conquer his desire for alcohol, but if the slightest occasion arose—*e. g.* the closing of a bargain—he would take what he mentally resolved should be his first and only glass. But, unfortunately, this first glass necessitated a number of others, each one supposed to be the last, and he was always under the

belief that he would be able to stop in time. A very small quantity of alcohol was sufficient to upset him, and he drank on until he became maniacal, aggressive, threatening, and violent. Within twenty-four hours from this stage he became delirious, had hallucinations of sight, and often had severe epileptic fits. As soon as he was deprived of stimulants he rapidly regained his senses, and the intellectual troubles did not further bother him. Several times during these attacks he made various attempts to commit suicide, but during his sane intervals he had no recollection of ever having attempted to do such a thing; and also during these intervals suicidal tendencies were completely absent. He had been sent to prison frequently during these attacks, and once to an asylum; and during his last confinement in gaol he had made three attempts to commit suicide. Dr. Villeneuve believed that L. T—'s actions could therefore be declared as irresponsible, and that his behaviour was manifestly due to an abnormal or pathological inebriety, due to a predisposition inherited from his grandfather; that he should not be considered a lunatic, as no mental weakness could be detected during his intervals of temperance; and that he was not responsible for his attempts to commit suicide. In conclusion, Dr. Villeneuve considered that L. T— should be confined in an inebriates' home, such as they have in other countries for similar patients.

As regards the drunkenness, the question of his penal responsibility belonged to the courts. However, on account of his morbid heredity, which makes him a "prédisposé," a palliation of such responsibility should be admitted.

SOCIÉTÉ DE NEUROLOGIE.

We are requested to announce the formation of the Société de Neurologie at Paris on the 8th June. It is designed for the purpose of holding regular meetings of medical men engaged in the study of nervous diseases, and will have as an official organ the *Revue Neurologique*. The president is Dr. Joffroy, and the general secretary is Dr. Pierre Marie.

MONTROSE ROYAL ASYLUM.

Dr. Howden's last great work in connection with the Montrose Asylum was to provide accommodation for the private patients in a separate building. This house, which stands in the immediate neighbourhood of the original asylum, has lately been opened; and it has been named in commemoration of Mrs. Carnegie of Charleton and Pitarrow, to whose generosity the institution was first indebted. The changes which have occurred since 1780, when the insane were kept in the Tolbooth, are indeed very striking. Certainly no better equipped asylum than Montrose exists for the benefit of the insane, and it is well that the pious founder should be commemorated in its latest development.

SWIFT'S HOSPITAL.

This historic institution has at last begun to come into line with modern asylums. By the acquisition of St. Edmondsbury, Lucan, which has been open for some months, the patients will have the advantage of a palatial establishment in beautiful grounds. The environment is all that could be desired, and we hope that the benefits of St. Edmondsbury will soon be shared by all who are under treatment at Swift's Hospital. The original building has long stood condemned for the purposes of asylum care and treatment, and it is to be hoped that the committee of management will lose no time in formulating plans for a modern institution at Lucan with a view to abandon the present building to other purposes. Such an

asylum is urgently required for the middle classes in Ireland, its financial success would be certain, and it is surely incumbent on the trustees of Swift's great charity that they should make it what he would have desired—the best possible.

CORRESPONDENCE.

From Professor Sikorsky.

In the Journal of Mental Science for January last, at page 174, I find a notice of my article on the *self-immured*. Although it was there translated from the *Revue Scientifique*, it was originally published in Russia in the journal of which I am editor—viz. *Voprosi Nervno-psychitscheckoi Medizin*. It is regularly sent to you, and is acknowledged in the list of your exchange journals.

[This letter from Professor Sikorsky gives us opportunity of directing attention to the Russian journals regularly received by us, and of inviting correspondents to undertake the translation of articles of interest in these periodicals.—Eds.]

SIR JOHN SIBBALD.

We have to congratulate Sir John Sibbald on the honour of knighthood which has crowned the work which he has accomplished as Commissioner in Lunacy for Scotland. His professional career in the Edinburgh Royal Asylum and the Argyll District Asylum was continued for nearly thirty years in connection with the General Board of Lunacy. We rejoice that his valuable services to the insane have been thus recognised on his retiring into private life, and wish him long and happy days.

OBITUARY.

Octavius Jepson, M.D.St. And., M.R.C.S.Eng., L.S.A.

Dr. Jepson was the eighth son (fourteenth child) of the late Mr. George Jepson, surgeon, of Gainsborough, and grandson of the Rev. George Jepson, prebendary of Lincoln Cathedral. He was born on July 24th, 1832, was educated privately at Newark and Southwell, and subsequently studied medicine at the University of Edinburgh. In 1858 he graduated as M.D. St. Andrews and obtained the English qualifications of M.R.C.S. and L.S.A.

In 1860 he was appointed an Assistant Medical Officer of the Middlesex County Asylum, Hanwell, and in 1862 was elected Medical Superintendent of St. Luke's Hospital, London, E.C. Towards the close of 1864 the Aldermen of the City of London decided to advertise for a Medical Superintendent for their asylum, then in course of construction at Stone, near Dartford, and after close competition Dr. Jepson was chosen from a large number of candidates, and entered into residence with the opening of the Institution in April, 1866. On the completion of twenty-one years' service he resigned in April, 1887, and was granted a pension of £800 a year (two-thirds pay and emoluments) by quarter sessions of the City of London, which pension he enjoyed for twelve years in quiet retirement at Sydenham, devoting himself to his extensive garden and books.

During the late spring and early summer months of each year he was to be seen at Margate, looking the picture of health, and apparently with a long span of life before him, but about eighteen months ago he began to flag, and developed cataract which progressively affected both eyes. He was present at the laying of the foundation stone of the new chapel at the City of London Asylum on June 18th last, and was then contemplating an operation ; this, however, he had not undergone

when on May 5th he succumbed suddenly to a ruptured aneurism of the aorta. At the time of his decease he was Master of the Founders' Company, upon the livery of which he had been many years.

Dr. Jepson was one of the old School of Medical Superintendents, now rapidly dying out, and at the City Asylum was possessed of almost autocratic powers. He kept himself in more active touch with the patients individually than is possible at the present time, owing to the increased office work entailed by the Lunacy Acts, 1890 and 1891, and was held in affectionate regard by the older patients. He was somewhat tall in stature, with refined features, cultured manners, and good address. During his term of office the death-rate at the City Asylum was remarkably low, never once reaching the average asylum death-rate, and the recovery rate was about that of other asylums.

His early life had infused into him a love of country sports, and for many years he hunted once a week with the West Kent Foxhounds, and at one time indulged in shooting. He was buried on May 10th in the churchyard at Stone beside his wife and three children, who had predeceased him by upwards of a quarter of a century. At the graveside, in addition to the members of the family and several old residents of the district, were congregated the present medical superintendent (Dr. Ernest White) and the old members of the staff, also several pensioners of the service who have been liberally treated by the Visiting Committee in return for good and faithful work. Dr. Jepson leaves two daughters to mourn their loss.

John Eustace, M.D.

We regret to record the death of an old member of our Association, Dr. Eustace, of the Hampstead and Highfield Private Asylums, Dublin, which took place at his residence, Elmhurst, on the 4th May, in the seventy-fourth year of his age.

He had been for some time in frail health. The death, in 1894, of his eldest son and assistant, Dr. John Eustace, jun., a young man of the greatest promise, was a severe blow to him, from which indeed he never quite recovered. The immediate cause of death was cardiac failure following upon influenza.

The establishments over which Dr. Eustace presided are among the oldest of their kind in Ireland. The undertaking was started in 1825 by Drs. Richard Grattan, Isaac Ryall, and Eustace, the father of our subject. The latter took over the property in 1857 in conjunction with his younger brother, the late Dr. Marcus Eustace, on whose death several years ago he became the sole proprietor. He was a man who, outside his own professional work, in which he was eminently successful, was engaged in many humanitarian and charitable undertakings. He was an energetic guardian of the poor. He was a member of the old Board of Governors of the Public Asylum for the Dublin District, in the working of which he was deeply interested. He was an assiduous and liberal promoter of the Syrian Asylum at Mount Lebanon. He was an ardent apostle of temperance. He was proud to belong to the Society of Friends, a body which has done so much charitable work in general, and has been particularly active in the care of the insane.

Dr. Eustace was a man of warm affections and a strongly-marked character. His sympathy with the insane was earnest and sincere. When he became governor of a public asylum he gave the best of his time and experience to its work, and though full of business of his own, often lay awake many nights in succession, planning improvements and ameliorations in the condition of the poor State-paid patients for whom his responsibility was but remote and fractional. He was probably the oldest alienist in Ireland, and at the meetings of the Irish Division, where he was a constant attendant, the old grey figure of the sturdy yet kindly Quaker will long be missed.

Dr. Henry Eustace succeeds his father in the management of the private asylums, and we are sure that he will faithfully follow in his footsteps.

THE LIBRARY.

The catalogue of authors' works in the Library is now being printed, and it is hoped that a copy will be ready for presentation at the Annual Meeting, together with the Report of the Library Committee.

NOTICES BY THE REGISTRAR.

Examination for the Nursing Certificate.

Six hundred and three candidates applied for admission to the May Examination for this certificate. Of this number 85 failed to satisfy the examiners, 9 withdrew, and the following were successful:—

ENGLAND.

West Riding Asylum, Wadsley.

Males: Roger Andrews, Herbert Clayton, George Halton, Charles Edward Jackman, John Memmott, Herbert William Watts.

Females: Annie Ellin, Hannah Morris.

North Riding Asylum, Clifton.

Males: William Samuel Goodburn Bryant, George Freestone, John William Harbottle, Matthew Kettlewell, Thomas Rodgers.

Females: Jane Bulmer, Annie Buckley, Dorothy Mabel Hawksby, Emily Ann Jones, Isabella Jaques, Elizabeth Mary Quinn, Edith Annie Rigby, Gertrude Sporle, Mary Elizabeth Urquhart.

West Riding Asylum, Menston, Leeds.

Males: Lewis Skinner Brock, George Fryer, jun., Alfred William Hartley, Edward Martin, Frederick Stephenson, Henry James Webster, John Joseph Walsh.

Females: Lucy Atkinson, Sarah Jane Brown, Sarah Hartop, Henrietta Hird, Eliza Hannah Littledike, Violet Ramsden, Annie Walsh.

County Asylum, Devizes, Wilts.

Males: Ernest George Arthur, Frank Burry, William Bailey, John Giles Long, William George Newman, Frank Sainsbury.

Females: Annie Parsons, Minnie Wilkinson.

County Asylum, Fareham, Hants.

Males: George Froud, Albert George Newman, Alexander Menzies.

Females: Mary Coutts, Emily K. Fletcher, Rachel James, Mary Elizabeth North, Kate Silk, Gertrude Slow, Sarah Ship, Jane Tubb.

County Asylum, Hatton, Warwick.

Males: George Masters, William Wincott.

Females: Alice Clarke, Minnie Alice Jones, Edith Meads, Sophia Eleanor Oliver, Annie Sidney Poole, Mary Poole, Ellen Stevens, Sarah Standbridge.

County Asylum, Aylesbury, Bucks.

Males: John Gow Bain, William Keen, Joseph Lawrence, Edward Lee, Wilfred Edward Bevan May, Joseph Mead, Edward Bland Storey, William Stratford, James Stanley.

Females: Harriet Bain, Elizabeth Ann Carter, Mary Jeffery, Louisa Augusta Baverstock Millard, Sarah Mackay, Alice Spencer.

County Asylum, Brookwood, Surrey.

Males: John Hope, Richard E. Jones, Herbert Stevens, Edward Taylor, William Thorndell.

Females: Elizabeth A. Jenkins, Annie Lintott, Edith Maud Lovelock, Jessie McCormack, Emily Agnes Mallyon, Jessie Stewart, Kate Louisa Maud Webster.

County Asylum, Garlands, Carlisle.

Males: Thomas Grainger, Archibald McFadyen, James Stephen, William Spedding.

Females: Mary Catherine Buckland, Evangeline Brown, Mary Walker Goodfellow, Mary Robson, Maria Robinson, Ann Robinson.

County Asylum, Wandsworth, Middlesex.

Females: Annie Gorsuch, Rose Fray, Alice Martin, Kate Page.

County Asylum, Abergavenny, Monmouth.

Females: Margaret Davies, Carrie Davies, Florence M. Gadd, Annie Hardwick, Jane Hardwick, Jessie Maddox, Sarah Martin, Mary Elizabeth Watkins, Ada Webber.

County Asylum, Bridgend, Glamorgan.

Males: William Freeman, Richard Edward Field, William Henry Hilborne, John Howells, John John, Daniel Johns, John Light, Thomas Llewellyn Morgan, Alfred Prynne, Walter Pearce, Rees Rees, Frank Spiller, Frederick Smith, John James Young.

Females: Margaret E. Codd, Amy Eleanor Clarke, Janet Davies, Charlotte Elizabeth Evans, Ada Frances Eales, Annie Griffiths, Elvira Harding, Mary Margaret Jenkins, Nellie Lloyd, Mary Hannah Lewis, Lilian Catherine Williams.

County Asylum, Rainhill, Lancashire.

Males: William Adams, Walter James Edward Bishop, James Croysdale, Albert Jolly, Sidney Frank Isworth, William Rowe, Thomas Renshaw, Thomas Wood Smith, Frank Suckling, John F. Woolgar, George Waddington.

Females: Kate Christian, Annie Elizabeth Brewer, Edith Garner, Sarah A. Hodgson, Amy Jones, Louise Muriel Jones, Elizabeth Parkes, Marion Parsons, Margaret Keith Robertson, Emily Winter, Laura Woodbridge, Mary Walley.

County Asylum, Nottingham.

Females: Louisa Bradley, Elizabeth Rimmer.

County Asylum, Littlemore, Oxford.

Males: Mark Weller, William Bailey Wyatt.

Female: Clara May Bull.

County Asylum, Stafford.

Males: Edwin Birch, David Dewsbury, Edward Tomlinson.

County Asylum, Hayward's Heath, Sussex.

Males: Ralph Barton, Ernest Betts, Walter Henry Hollingdale, Albert Edward Hunt, William Mills, William Mouat, Jasper Pattenden, Patrick Quinn, Stephen Walter Sims, Arthur Henry Smith, Frank Tarry, Harry Thomas, Harry Lloyd Wiggleworth.

Females: Margaret Balcombe, Mary Derbyshire, Elizabeth Dawson, Louisa Green, Silvia G. Haynes, May Otterway, Margaret Smith, Janet Yule.

County Asylum, Melton, Suffolk.

Females: Lizzie Cooling, Julia Metcalfe, Alice Potter, Annie Sexton, Sarah Scales, Elizabeth Cordelia Wood.

LONDON COUNTY ASYLUM, CLAYBURY, ESSEX.

Males: Christopher Banks, William Birch, Arthur James Cooke, George Deadman, Albert E. Finding, Thomas Hart, Arthur Hazell, James McCubbin, John Siddle.

Females: Cecilia Agnes Atkinson, Mary Alice Backhouse, Mary Ann Bath, Rose Beckingham, Ellen Browne, Catherine Minnie Carey, Dora Childs, Helen Cran, Elizabeth Louise Crumpton, Jessie Bertha Davis, Nellie Davis, Julia Edwards, Jane Ellen Griffiths, Maria Higgins, Ethelene B. Horry, Helena J. Hughes, Beatrice Mary Hunt, Emily Syton Jones, Kathie Jones, Marian A. W. Marshall, Gertrude Meddoms, Georgina Pennell, Ethel L. Rose, Annie Alice Trafford, Florence Edith Watling, Ellen Williams, Alice Wright.

COUNTY ASYLUM, EXMINSTER, DEVON.

Males: John Squire Baker, Thomas Doidge, James Cockram, Henry Crook, Ernest Edward Gale, Henry Mortimore, John Stevens.

Females: Amelia Beckton, Mary Clarke, Ellen Clarke, Annie Draydon, Francis Annie Fisher, Helen Headon, Lucy Middleton, Agnes Morriss, Florence Stadden.

COUNTY ASYLUM, CHARTHAM, KENT.

Males: Alfred Baker, John Head, Walter Henry Wise, Francis Veysey.

Females: Bertha Broughton, Frances Potter, Rosa Palmer, Judith Stanley, Myra Smith, Annie Uglow.

LONDON COUNTY ASYLUM, CANE HILL, PURLEY, SURREY.

Males: James Newberry, William George Sawyer.

Females: Harriet Brinded, Alice Maud Clavel, Emily Honey, Dora Kohler, Minnie McElroy, Kate Simmonds.

LONDON COUNTY ASYLUM, BANSTEAD, SURREY.

Males: William Cole, Charles Fox, Alma Knowles, William Osgood, Robert Shaw Tickler, George Edwin Walker.

LONDON COUNTY ASYLUM, COLNEY HATCH.

Males: Alfred Archer, Charles Brown, Henry Carter, Edward Davidson, Thomas Farey, George Frederick Green, Edmund J. Hooper, Richard Keen, George Langlois, James Leech, Frederick William Lincoln, Walter John Marshall, Charles Harry Mindenhall, Henry Richard Morris, George Alfred Newman, Frank Taylor Rayment, Alfred Reason, Frank Rush, George Henry Russell, Jos. Simms, George Henry Slough, Alfred John Swain, Edmund Thomas, William Thompson, Arthur William Walton, David Willoughby.

CITY ASYLUM, STONE, DARTFORD.

Males: Albert James Goodhew, George Wadman.

Female: Sarah Marion Evison.

CITY ASYLUM, HULL.

Males: Herbert Boyce, Frederick Langfield, William Henry Riley.

Female: Sarah Ellen Carling.

CITY ASYLUM, GOSFORTH, NEWCASTLE-ON-TYNE.

Males: Arthur Thomas George Corbitt, James Dewar, James McGregor, Matthew Nicholson, John Ogg, George Robert Parker.

Females: Mary Ann Akrill, Elizabeth Cleghorn, Sarah Ann Cooke, Emma Lavinia Duffield, Bridget McLaren, Annie Catherine Patterson, Wilhelmina Sarah Reid.

CITY ASYLUM, BRISTOL.

Males: William Henry Burnell, George Jones, Thomas Sidney Millington, John Maysom Millington, John Francis Neville, John O'Neill, Ernest George Pope, George Robbins, Alfred Smith.

Females: Rose Ruth Andrews, Nellie Amelia Berry, Annie Berry, Julia Cramp, Alice Forster, Emily Wood.

City Asylum, Exeter.

Males: Charles Hayman, Charles George Seldon, George Tucker.
Female: Alice Maud Harris.

Borough Asylum, Portsmouth.

Males: Harry Barfoot, Henry Furlong, Henry Hosseck, John Masters, Ernest Robinson, Francis Ridge.
Females: Clara Allen, Emily Louisa Cutting, Caroline Hunt, Phœbe Hunt, Henrietta Just, Mabel Lewis, Emily Murphy, Julia McKenzie, Eliza Jane Snook, Grace Seeking, Lizzie Wakelin.

City Asylum, Winson Green, Birmingham.

Male: Henry Grice.
Females: Beatrice Baker, Lydia Cobley, Louisa Lindsay, Edith J. Townsend, Bessie Watts, Daisy Marion Yarnall.

City Asylum, Rubery Hill, Barnt Green, Birmingham.

Males: Walter Henry Devonport, William Rogers, Edwin Rogers.
Females: Mary Hares, Maria Hodgkins, Annie Round, Mary Smith, Amy Willetts.

Malling Place Asylum, Kent.

Female: Hellen Bichan.

Bethnall House Asylum, London.

Females: Nellie Lowe, Eva Robinson.

The Retreat, York.

Males: George William Brooks, Thomas Henry Watson.
Females: Mary Eliza Bancroft, Florence Neppiras.

Leavesden Asylum, Watford, Herts.

Male: Frank Cox.
Females: Elizabeth Davis, Mary Eynthoven, Jane Lewis, Minnie B. Pepper, Elizabeth Stone.

Holloway Sanatorium, Virginia Water, Surrey.

Female: Alice Chapman.

Bethlem Hospital, London.

Male: George William Benge.

Broadmoor Asylum, Wokingham, Berks.

Females: Amelia Alice Gooderson, Mary Ann Harbour, Jane Ann Matthieson, Ethel Christian McQuirk, Edith Sudbury.

SCOTLAND.

Royal Asylum, Glasgow.

Male: William F. Craik.
Females: Annie Duncan, Maggie A. Grosset, Jeanie Grey, Rachel M. McCreery, Martha Russell, Adele Schneider, Isabella Shand.

Royal Asylum, Edinburgh.

Males: James McKenzie, Alexander Stephen, John W. T. Bews.
Females: Marion A. Ashby, Edith M. Hogg, Agnes Muir, Ina Livingstone McLachlan, Mary M. McKinlay, Grace G. Keith, Jeanie McLeish, Helen McDonald.

"James Murray's" Royal Asylum, Perth.

Males: David Duncan, John McLagan, Alexander Wylde Thornely.
Females: Caroline Fletcher, Christian B. Lumsden, Mary Morrison.

Royal Asylum, Dundee.

Males: George High, Samuel Stevenson.
Females: Rosina Atkinson, Alice MacDonald, Annabel L. Irvine.

Royal Asylum, Aberdeen.

Males: James Kindness, James Tait, James Williams, William Walker.
Females: Lizzie C. Brodie, Elizabeth Brodie, Bella Fraser, Isabella Driscoll, Iamentina Lindsay, Annie L. Murray, Isabella McKenzie, Agnes Mackie, Mary Ann Tawse.

Kirkland's Asylum, Bothwell.

Females: Alice Grant, Mary Lawrence, Sarah Port, Catherine McDonald Ross.

Hartwood Asylum, Shotts, Lanark.

Males: John Calder, Donald Chalmers, Daniel Gaitens, Alexander Ross.
Females: Nellie Denholm, Jessie Milne, Rachel Wright.

Ricartsbar Asylum, Paisley.

Males: Francis Gordon, James Sangster.
Females: Barbara Donald, Mary McPherson.

Fife District Asylum, Cupar.

Females: Annie Brown, Christina Balcanguall, Annie More, Bella Tait.

Perth District, Murthly.

Male: John Middleton.
Females: Annie R. Chisholm, Mary R. McAra.

Smithston Asylum, Greenock.

Males: Hugh McKie, John Urquhart.
Females: Mary Barr Clark, Ann Elizabeth Stewart.

Mavisbank Asylum, Midlothian.

Females: Edith Moir, Jemima Proudfoot, Mary Ritchie.

IRELAND.

Richmond Asylum, Dublin.

Males: William Doheny, Charles Johnston, James Loughlin, William Maher, Andrew M'Mullen, Denis O'Donoghue, Arthur Rothwell, James Scally.
Females: Lizzie Byrne, Mary A. Cullen, Lucy Doyle, Teresa Fottrell, Annie Gaffney, Mary Holohan, Ellen Kinsella, Katie Mulligan, Mary Irwin Shaw, Annie Weeding.

District Asylum, Cork.

Males: Thomas Hayes, Christopher M. Leavy, Patrick Murphy, William F. Murphy, Maurice Quinlan, Michael Rogers.
Females: Ellie Casey, Mary Cogan, Ellen Sullivan.

District Asylum, Ballinasloe.

Males: Patrick Cusack, John Cunniff, Patrick Campbell, Martin Reilly, William Walker.

District Asylum, Omagh.

Males: Hamilton Armstrong, Francis Burns, George Nixon, Patrick O'Neill, Henry McSorley, Hugh McTeggart, James McEnhill.
Females: Emma Stewart, Teresa Morrison.

HIGHFIELDS ASYLUM, DRUMCONDRA.

Females: Annie M. Dolan, Harriette A. E. Price.

The following is a list of the questions which appeared on the paper:

1. What is muscle, and what are tendons? Give the different kinds of muscle, with examples of each. 2. What bones form the knee-joint, and what kind of joint is it? 3. What is hæmorrhage? Distinguish between the different kinds of hæmorrhage, and say how you would treat them. 4. What is a rigor? What would you do for a patient who was suffering from a rigor? Why is it important to report to the doctor that a patient has had a rigor? 5. What symptoms point to disease of the lungs? Enumerate some of the more common diseases of the lungs? 6. Make a list of the articles that will be required—(*a*) when a patient is to be forcibly fed; (*b*) when a catheter is to be passed. 7. What precautions are to be observed in feeding general paralytics? 8. What do you understand by dementia? Describe the appearance and conduct of a dement. 9. Suppose you have charge of a demented patient who never speaks, what signs would render it necessary to report to the doctor that this patient was attacked by a feverish illness? 10. What is the injury most likely to occur to a violent patient in controlling him in an outbreak of violence? What precautions ought to be taken to guard against this injury?

NEXT EXAMINATION FOR NURSING CERTIFICATE.

The next examination will be held on Monday, November 6th, 1899, and candidates are earnestly requested to send in their schedules, duly filled up, to the Registrar of the Association, not later than Monday, October 9th, 1899, as that will be the last day upon which, under the rules, applications for examination can be received.

NOTE.

As the names of some of the persons to whom the Nursing Certificate has been granted by the Association have been removed from the Register, employers are requested to refer to the Registrar, in order to ascertain if a particular name is still on the roll of the Association. In all inquiries the number of the certificate should be given.

EXAMINATION.

The Examination for the Certificate in Psychological Medicine will be held on Thursday, July 13th, 1899, at 10 o'clock a.m., in London, at Bethlem Hospital; in Edinburgh at the Royal Asylum, Morningside; in Glasgow at the Royal Asylum, Gartnavel; in Aberdeen at the Royal Asylum; in Dublin at the Richmond Asylum; and in Cork at the District Asylum.

GASKELL PRIZE.

The Examination for the Gaskell Prize will be held at Bethlem Hospital, London, on Friday, July 14th, 1899, at 10 o'clock a.m. Candidates for this examination must give fourteen days' notice of their intention to sit at the examination to the Registrar.

NOTICES OF MEETINGS.

Medico-Psychological Association.

The Annual Meeting will be held in the rooms of the Association, 11, Chandos Street, London, W., on 27th and 28th July, 1899, under the Presidency of Dr. J. Beveridge Spence.

Northern and Midland Division.—The next meeting will be held at the West Riding Asylum, Menston, near Leeds, on October 11th, 1899.

South-Western Division.—The next meeting will be held at Digby's Asylum, Exeter, on October 17th, 1899.

South-Eastern Division.—The next meeting will be held at Bethlem Royal Hospital, London, S.E., on October 16th, 1899.

Irish Division.—The next meeting will be held at the New Asylum, Antrim, on July 25th, 1899.

APPOINTMENTS.

Bruce, L. C., M.B., C.M., appointed Medical Superintendent, Perth District Asylum.

Cassidy, G. C., M.B., C.M., appointed Medical Officer, Ernjanyana Asylum, Transkai, South Africa.

McGrigor, H. J., M.B., C.M., appointed Assistant Medical Officer, Murray's Royal Asylum, Perth.

Moore, W. D., M.D., M.Ch., R.U.I., appointed Medical Superintendent of the Holloway Sanatorium, St. Ann's Heath, *vice* Dr. S. Rees Philipps, resigned.

Robertson, G. M., M.B., F.R.C.P.E., appointed Medical Superintendent, Stirling District Asylum.

Turner, G. A., M.B., D.Ph., appointed Assistant Medical Officer, Grahamstown Asylum, South Africa.

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Part I.—Original Articles.

The Presidential Address delivered at the Fifty-eighth Annual Meeting of the Medico-Psychological Association, held in London on the 27th July, 1899.

By JAMES BEVERIDGE SPENCE, M.D.

IT was with many misgivings as to my own ability to fill to your satisfaction—to say nothing of my own—the distinguished position which I to-day so unworthily occupy that I accepted more than a year ago the generous and under any circumstance gratifying nomination of the Council, and I have to-day to thank the Association for placing upon that nomination the seal of its approval by electing me at the last annual meeting to occupy the position which has been held with advantage to this great Society and honour to themselves by men of whom I may say without any pride-aping humility that I feel how inadequate any efforts of mine must appear when compared with the work which many of my predecessors in office have done and are doing on behalf of science in general and of this learned Society in particular. I trust, however, to make up by the brevity of my remarks this afternoon for some of my deficiencies, and pray you in judging my words and actions to-day and during the time I may be permitted to preside over your meetings to take the kindly will for the imperfect deed, and to believe that it is my earnest desire to merit your commendation and to maintain in every way in my power the dignity of the position which I now hold by your favour.

The near approach of the closing year of the century might well serve as a pretext for placing before you a summary of the changes—the advances—which have taken place in the treatment of the insane, and for directing your attention to the vast strides which those who have devoted much of their time to the scientific side of our speciality have made towards a clearer conception of the many problems surrounding the study of insanity; but to one who, whether from inclination or from compelling circumstance, has had his thoughts directed mainly towards one special subject for some years past, it seemed better to place before you a short account of the history and progress of a movement which has so far, and in a comparatively short time, done so much towards ameliorating the condition of the insane and of improving the status of those who are closely engaged in the care of the mentally afflicted—a movement which, I believe, is destined to have still greater developments of its usefulness when that perhaps natural but certainly not unusual objection to new methods which is so strong among us has been overcome, and a full recognition of the great advantages to be derived from the introduction of the system of training and educating our nurses and attendants has become more general.

Before, however, entering upon my subject it is necessary that I should follow the traditions which appear to be connected with the Presidential Address, and refer to some matters of moment which have occurred during the past year affecting the work in which we are specially engaged, nor should the memory of those who have passed away from among us during the year be forgotten in this short review of recent events.

The late Dr. Case, who for nearly twenty-one years presided over the great Metropolitan Asylum at Leavesden, was not permitted to enjoy for any lengthened period the pension which he had so well earned; while Dr. Bywater Ward, of the Warneford Hospital, after twenty-five years of able and successful work, had only retired from the duties of his office for one year before he, too, was called away. At the time of his retirement the governors of the hospital, in addition to the grant of a suitable pension, recorded in a special minute their high appreciation of the valuable services Dr. Ward had rendered at the Warneford Hospital. Only recently we heard that Dr. Octavius Jepson, for many years Medical Super-

intendent of the institution at Stone, near Dartford, which is now conducted with such marked ability by our friend Dr. Ernest White, had passed away very suddenly while in the enjoyment of the leisure and reward which he had earned by a long period of devotion to duty; and by the death of Dr. John Eustace a well-known and much respected member of our Association in the sister isle has been removed, after a long life full to overflowing of good works carried out on behalf of the mentally afflicted, not only in his own country, but in distant lands. Our and everybody's friend, the late Dr. Paul, was taken away full of years and honour on January 29th last, and the Association has lost in him a staunch supporter who, as long as he was able to attend our meetings, was one of its most regular, hard-working, and useful members. The death of Dr. Paul severs one of the last links connecting the modern with the old and barbarous method of dealing with the insane, for all will remember the story related in *Tuke's Dictionary* how that one of King George III's attendants told Dr. Paul "that he was witness to the fact of another 'keeper' striking His Majesty and knocking him down flat as a flounder." In a short obituary notice in the JOURNAL OF MENTAL SCIENCE for April I see it stated that "in days long gone by, when money was scarce and members few, the Treasurer practically kept the Association and its Journal going by the generous expenditure of considerable sums which he never mentioned." For this we owe his memory grateful thanks; but any rich man might have done this, to John Hayball Paul only was it granted to be able to speak the encouraging, welcoming words to a new member—to brighten up our social gatherings with his wit and genial presence, and to help in the most unostentatious manner when occasion required those who were not so well endowed with this world's goods as he happened to be. One cannot help expressing a wish that in some way or other the name of Dr. Paul might be associated in a permanent fashion with the Association to which he was so much attached during his long and useful life; and if no better plan of doing this can be suggested, it might be possible to establish a prize open to competition among the holders of the nursing certificate, or by the annual donation of a grant of money to some useful object having the benefit of our nursing staff in view, the prizes for which the professional members of our body are

eligible being up to the present quite as numerous as appears necessary, judging by the small amount of competition which they evoke.

The regretted retirement of Dr. Reginald Southey from the post of Commissioner in Lunacy was followed in due course by the appointment of Dr. Sidney Coupland, a gentleman of well-tried ability in other departments of our profession.

In Scotland Sir John Sibbald, after a long and distinguished occupancy of the post of Commissioner, has retired full of honours if not of years, to judge by his hale and active appearance, and has been succeeded by a well-known member of our Association, Dr. Macpherson, late Superintendent of the Stirling District Asylum, a visit to which institution during the last Annual Meeting of the Association afforded much pleasure and instruction to those who were privileged to see the results of Dr. Macpherson's admirable work in the conversion of an old into a thoroughly comfortable and up-to-date establishment.

Little has been accomplished, although some attempts have been made, in the way of adding to or amending the laws relating to matters in which we are directly interested since the date of the last Annual Meeting. It is well known to all of you that the Lord Chancellor has introduced a Bill with a view to making certain changes in the Lunacy Law, some advisable, some unnecessary, and some inadvisable. To the former category belong the clauses which permit of the temporary care of incipient lunatics, that which adjusts the liability between local authorities and guardians, and Sub-section 2 of Clause 18 which repeals Section 269 of the principal Act limiting the amount of weekly charge to be defrayed out of the county or borough fund to one fourth of that charge. Many important bodies consider Clause 19, compelling the notification to the Commissioners in Lunacy of any alteration in the apportionment or use of any portion of an asylum to purposes other than those for which they have been primarily intended, as savouring too much of government by central authority ; but personally I do not see much object in having a controlling body if that authority has not power to enforce such an important detail ; while with regard to Clause 1, referring to urgency orders, there appears to be a consensus of opinion among those who have most to do with private patients—especially in London and its neighbourhood—that the alteration of the time during which an urgency

order shall remain in force from seven to four days is unnecessary, and will probably be productive of much inconvenience without any corresponding advantage. The two main points, however, which specially interest those who are engaged in asylum service are the omission of a compulsory pension clause, and the unsatisfactory nature of Clause 21 referring to the power to grant an allowance or gratuity in case of injury. A compulsory pension clause of a very inadequate character was included in the Bill when it was first introduced this session into the House of Lords, but was withdrawn by the Lord Chancellor, as a result, to judge by the report in the *Times* of April 21st, of the remarks of the Marquis of Ripon and of the Earl of Kimberley. Without any desire to say a single word that could be construed as disrespectful to these noble Lords, one cannot but think that something more than their arguments must have produced a result which was on the whole a good one owing to the inadequate nature of the provision for retiring allowances which the clause, if allowed to become law, would have sanctioned ; and although grateful to the Earl of Kimberley for his kindly reference to asylum employés as worthy of liberal consideration at the close of a long and arduous service, it would have been more to the purpose if he had proposed the insertion of a clause which, while leaving the maximum pension as permitted in Section 280 of the Lunacy Act, 1890, would have, by fixing a just minimum, given a certain security that some reward awaited the worn-out attendant, or nurse, or other official when the power to take further useful part in the trying work of caring for the insane was removed from them either by accident, illness, or increasing age. Lord Ripon's argument that the necessity of the case had been met by the County Council of Yorkshire's present increase of the salaries of those engaged in asylum work does not commend itself as advantageous either from the point of view of the recipient or of the ratepayer. The clause conferring power to grant an allowance or gratuity in case of injury asserts a principle which one is glad to see recognised, but the regulations contained in the first schedule are so unsatisfactory that the only way to improve them would appear to be to delete them *in toto* from the Bill.

The question how best to combat what the newspapers call the "white fiend"—consumption—has recently been brought

very prominently before the public, and a powerful impetus has been given to the movement by the very practical interest which His Royal Highness the Prince of Wales has shown in this most important and interesting subject. To those of us who are connected with asylums the matter presents itself from many points of view. As farmers—and are we not often taunted as thinking more of this side of our work than of the scientific aspect of it?—we have to consider how we may eliminate from our herds the tainted animal; as purveyors of food we need to take advantage of any apparatus which will remove the risk lurking in the milk can; as physicians we must be prepared to recognise the disease in its earliest stage with a view to its treatment as far as that can be carried out under the somewhat artificial conditions which regulate the life in confinement of one who is mentally afflicted; and as sanitarians we must take such steps as may tend to minimise the possibility of communicating the disease to others who from inherited or other peculiarities might serve as a likely nidus for its development. Even without the stimulus of legislation it seems possible to carry out on the farms attached to our large asylums some such system as appears not uncommon in America, where no animal is introduced into the milk-yielding herd of the farm without being thoroughly examined by the tuberculin test.

To show how necessary a careful examination of the milking herd even in the well-managed farms attached to our asylums is, one need only refer to a paragraph which appeared in the *Times* of April 17th, in which a description is given of the testing of forty dairy cows at the Home Farm, Windsor, with the result that at least thirty-two of the cows appeared to be affected, while only five could be pronounced healthy and the remainder doubtful. It was decided under the circumstances that the whole forty should be killed and submitted to a careful post-mortem examination. In thirty-four of the cows tested the temperature rose to 104° or higher, and of these thirty-three were found to be tuberculous; while in the remaining cow, though no tuberculous lesion could be discovered, the uterus was found to be diseased. In four cows the temperature remained undisturbed, and with one exception these animals appeared to be free from tubercular disease. Prof. McFadyean, commenting upon these facts, states "that the premises in which the cows of the royal herd were kept are probably the best in the

kingdom from the point of view of cubic space, light, and ventilation, tuberculosis had, nevertheless, attacked thirty-six out of forty cows. Hence it is inferred that among dairy cattle this disease cannot be successfully combated simply by insisting upon a cubic capacity of 800 feet per animal in the cowsheds. There is only one way of keeping housed cattle free from tuberculosis, and that is by insuring that no tuberculous animal is admitted among them. This plan has been adopted in establishing a new dairy herd at the Queen's Home Farm, all animals purchased for it being tested by tuberculin, and admitted only when they failed to react." As a precautionary measure all milk used in the wards should be boiled—or, better still, Pasteurised—before being issued. Dr. Klein states that milk can be made innocuous by being heated to a temperature of 155°—that the flavour of milk thus heated is not affected and its nutritive quality not diminished as by boiling. So heated the milk is said to throw up cream much more rapidly, and keeps longer than milk not so treated. In their day-rooms and dormitories ample light and air should be given to the patients under our charge, and when cases of phthisis occur they should be isolated, and such precautions taken as the complete destruction of sputum and the disinfection of clothing, rooms, &c. The instruction of the staff in all measures which would tend to prevent the possibility of an extension of the disease from an infected centre is most necessary, and in any future edition of the *Nursing Handbook* a page or more might well be devoted to this subject, and definite rules laid down for the guidance of those engaged in the nursing of such cases.

Speaking of the isolation of phthisical cases Sir James Crichton-Browne, in a speech delivered at the Poor Law Conference on this subject, said: "Our greatly increased and now exact knowledge of the nature of tubercular disease and of its modes of propagation makes it in my opinion obligatory upon those having the control of public institutions into which tuberculous patients are received to arrange for their complete separation from the other inmates, and such a separation is especially necessary where the other inmates are in states of debility predisposing them to contract tubercular disease."

In planning new asylums, or where extensive additions to existing institutions are contemplated, full consideration should be given to the question of providing special wards for the care

of patients suffering from phthisis, not so much perhaps in the interests of those actually affected as in order to protect others from possible contamination.

Of the 7298 deaths which occurred in English asylums during the year 1897, as many as 1064 are assigned to phthisis as the cause. And even this large proportion does not represent the entire sad truth, as doubtless many of the deaths which are returned under other headings, such as epilepsy and general paralysis, might with almost equal accuracy have been included under the head of tubercular disease of one form or another, were it not that in compiling the table it was necessary for the Commissioners in Lunacy to restrict the number of causes in each case of death to one form of disease; indeed, Dr. Clouston, in his work on *Mental Diseases*, says that consumption "is in all asylums for the insane between three and four times more common than in the general population at the same ages."

It is a gratifying fact, and one that reflects much credit upon many members of this Association, that in several of our asylums the various precautions which are now being pressed upon the attention of the country have been in operation for some time,—with what result I am unable to state definitely, as I have refrained from making close inquiry on the subject, in the hope that those who are entitled to the honour might be induced to give us the results of their efforts at an early meeting of the Association in a more ample fashion than it would be possible to do in this address.

It might also be well to consider the advisability of forming a small committee in order to indicate our sympathy with the more public movement to which I have before alluded, and when necessary to take steps to enforce by every legitimate means the advantages to be derived from the treatment of those suffering from consumption as the victims of a markedly infectious, and to a great extent preventable disorder.

The inauguration of the Home for Epileptics at Chalfont St. Giles, and the munificent offer of the David Lewis trustees to establish a colony for epileptics in Lancashire, indicate the practical interest which is now taken in those unfortunates who not long ago were forgotten by the philanthropic public, or if remembered were relegated to the category of those for whom little or nothing could be done. The action taken by the

London County Council in setting apart wards for the treatment of the epileptic insane is also worthy of notice.

All efforts of this description must have our entire sympathy, but one cannot help expressing the opinion that in the case of the epileptic insane much judgment will need to be exercised in the selection of suitable cases for the special wards referred to, as it is not easy to contemplate with satisfaction the idea of asylums filled with a class of certified epileptics such as one has had to deal with in considerable numbers in Staffordshire. The harmless epileptic is not, it is true, unknown to us, but we have also had some experience of the turbulent, noisy, aggressive, discontented, foul-mouthed, and vindictive individuals who increase the anxiety of all who have to do with them, and who, as a result of their unfortunate mental condition, are perhaps the most trying class to be met with in our county asylums.

The Act regulating the treatment of habitual inebriates and sanctioning the establishment of suitable reformatories, which has recently come into operation, confers powers which are not quite in harmony with the principles to which we have hitherto been accustomed in free England. The practical working of the Act will no doubt be watched and criticised very closely, but the time had certainly arrived when even the public opinion of this country—so reluctant to sanction anything approaching curtailment of the liberty of the subject—felt that some control should be exercised over the habitual drunkard, who was his own worst enemy, and generally a source of annoyance to those who had to deal with him, being, in the words of a former Act, "a person who, not being amenable to any jurisdiction in lunacy, is, notwithstanding, by reason of habitual intemperate drinking of intoxicating liquor, at times dangerous to himself or herself, or incapable of managing himself or herself, and his or her affairs." The statute applies to but a limited number of the class for whom legislation is necessary, as it only takes cognizance of habitual drunkards who are convicted of an indictable offence, and who, in the opinion of the Court, may have committed that offence when under the influence of drink, or where drunkenness served as a contributing cause, or where an habitual drunkard is found drunk in any public place, or who commits an offence against the Licensing and similar Acts after having within twelve months been convicted at least three times of a similar offence. In such cases the Court is empowered to

order the detention of the offender in a State or private certified inebriate reformatory for a period not exceeding three years. The reformatory must be officered by total abstainers, and any lapse from the strict path of sobriety on the part of an official will render him or her liable to lose what at the best will not be a very attractive position. The establishment of these inebriate institutions on a proper basis will require the exercise of the greatest judgment and discretion; and so far the authorities, with the exception of the Gloucestershire County Council, who purpose opening a reformatory for males at Brentry, Westbury-on-Trym, some time during the early autumn of this year, appear to have fought shy of taking action in the matter; but when the time comes—as come it certainly will—when the formation of such institutions enters the region of practical politics, it is hoped that the closer they are brought into line with hospitals, and the further they are removed from the suspicion of being prisons, the better chance there would seem to be for an experiment which, where it has been fully tested, is said to have had most satisfactory results even in very unlikely cases, to say nothing of those milder forms in which one sees the greatest prospect of recovery from a vice which contributes so many victims to our prisons, workhouses, and lunatic asylums.

The first case under the Habitual Inebriates Act was tried at Blackburn Sessions on April 7th. A woman named Ellen Tracey, forty-six years of age, having pleaded guilty to larceny, was found guilty upon another count chargeable with habitual drunkenness. The Recorder sentenced her to one month's imprisonment, to be followed by detention in an inebriate reformatory for three years or such less time as the Home Secretary might determine. Since then other cases have been brought to the public notice, in one of which in my own county the offender was sent to an institution in the west of England, the County Council having decided to pay the difference in the cost of maintenance between the charge made and the amount contributed by the Treasury.

The interest which has been aroused of late years in the important subject of the nursing of the insane and the intimate connection which the duties of Registrar has created between the holder of that office and those engaged in training and being trained has suggested that a short account of the origin

and progress of the work would be acceptable to the Association at this time, especially as a step forward is about to be taken with a view to still further increasing the value of the certificate, and to removing as far as possible the objections which have been perhaps with some truth brought forward in connection with the examination, particularly with regard to the variation of standard which it is possible may have arisen in rare instances in estimating the value of the replies to the written questions. The entire subject of the nursing staff of our asylums, not only as regards its educational aspect, is full of interest to those who are engaged in the treatment of the mentally afflicted. Questions may be asked and doubts entertained as to whether we have the right material from which to fashion our trained mental nurses. Is everything being done that might be done to attract the proper sort of persons and to keep them in the service when we have trained them? Can life in the wards of an asylum be made less arduous either by an increase of the staff and a division of the responsibility, or by a decrease in the hours of labour and a greater amount of freedom? Would thoroughly assured pensions serve as an inducement to longer service? Perhaps some may think it impolitic to use the word prison in connection with anything relating to asylums, but it is only introduced here in order to institute a comparison between the duties, emoluments, and pensions of those brought into direct contact with the inmates of the two classes of institutions. Our much esteemed Treasurer, to whom we are so greatly indebted for the interest he has taken in the pension question as well as in all other matters which affect the interest of those who are employed in asylums, has made a most careful and complete study of the police pension system as an example of the way in which asylum officials should be treated, but so far very little attention has been drawn to the point to which I am now referring, and probably there may be good reasons for this; but it seems to me that no harm can result from briefly stating to the facts as I have been able to gather them. Prison warders are, as I am informed by a highly placed official, obtained from the same class which supplies our nurses and attendants; their duties are, to say the least, not more onerous; their wages are as good, their prospects of advancement are greater, and they have the supreme advantage of being certain of some gratuity or pension

at the end of their service—up to ten years a gratuity of one month's pay for each completed year of service, or at the same rate in the event of marriage of female warders after six years' service. After ten years the pensions allowed are on the Civil Service scale—one sixtieth of the payment received at the time of expiration of service for each year served, but the total amount not to exceed two thirds of pay, and—it is presumed—allowances. Why should not our nurses and attendants have some such certainty offered them as an inducement to enter and remain in the asylum service? A gratuity at the end of ten years, and in the event of marriage at the end of six years, might prove a great encouragement to remain to many of our respectable nurses, who, being young, as a rule do not look forward to pass the best days of their lives in pursuit of a pension, but who would be very likely to give us six years or more of good work if they felt that in case of their marriage a small sum of money would be theirs, sufficient to enable them to assist in furnishing the home which it is the natural desire of most women to possess. I hope the day is not far distant when, instead of being glad to take advantage of the services of any respectable young man or woman who may offer themselves for the work, we may be able, owing to the advantages which the position of nurse in an asylum should afford to select our people, to insist upon some sort of preliminary education, at least to the extent required by the prison service, where the candidates are compelled to qualify in reading and writing, and must be able to work sums in the simpler rules of arithmetic. I do not wish to suggest that a large proportion of our nurses would not be able to successfully stand such a test, but it would give more dignity, if I may so express it, to the candidature of the individual if systematic inquiry were made into the education which no adult has any excuse to be without in these days when free and ample provision is made by the State for the preliminary mental training of every child in this country.

I often hear it said that no nurse in such and such an asylum is appointed to the charge of a ward who has not undergone the training required for, and by examination obtained, our certificate. All I can say is that the superintendent is happy who can so pick and choose—who can make and keep such rules—who is not called upon, as many of us have at times been, to put the round peg in the square hole, and whose enthusiasms

have not been damped by the difficulty of obtaining just the right sort of persons to fill the vacancies which not infrequently arise, especially among the junior members of the nursing staff.

Some time ago I saw in the correspondence column of one of the nursing papers an inquiry as to whether the insertion of a paragraph advocating that "ladies and gentlewomen" only (I quote the words of the question) should be engaged as nurses, would have any effect in stopping domestic servants from becoming nurses, and the reply struck me as being a peculiarly sensible and happy one. "Not the slightest," wrote the editor: "many matrons prefer the right kind of domestic servants to train, and many patients prefer such to nurse them," and this I believe to be perfectly true; but we want to get hold of the right kind of domestic servant if we determine to engage such, and to do this it is essential that we offer advantages which cannot be obtained in the ordinary occupations of civil life. Nowadays, owing to the demand for good servants, private employers are glad to pay almost any wages in reason to a well-recommended parlour, house, or nurse maid, and as it is this superior description of domestic servant which we desire to attract, if satisfied with the class, it follows that at least in some of our asylums an addition to the salaries and comforts of the staff must be made if we are to induce the proper sort of women to engage and continue in the arduous and at times harassing occupation of an attendant upon the insane.

My experience in the country has been that apart from the musician element I have had but little difficulty in obtaining suitable men for the ordinary wards, while the sick nursing of the male patients is unquestionably a department in which the services of women will be more and more utilised as special and separate hospital wards are provided as adjuncts to all properly equipped asylums.

From inquiries I have made in other countries it does not appear that the nursing staff of our asylums differs very much from the same class in France, Germany, Belgium, and America; indeed, as regards emoluments, leave, length of duty hours, and diet, it would appear that the English and Scottish asylums offer advantages at least equal to those to be obtained in any foreign service. In France the secularisation of the hospitals in Paris necessitated the training of new lay nurses in order

to render them capable of undertaking the work which had previously been carried out by religious sisterhoods, and so at La Salpêtrière, the Bicêtre, and in other institutions not only are training schools now in operation, but primary courses of instruction have been instituted for the education of the uncultured candidates who have been engaged to fill the places of the discharged sisters. An attempt has been made to utilise these primary classes for professional training,—for example, the pupils were set to copy translations of portions of our *Nursing Handbook* instead of the usual lessons in writing and spelling. At St. Anne and elsewhere systematic instruction is also given to the nurses, but, as far as can be gathered, special training in the French asylums is not carried out to any great extent as yet. The condition of the nursing staff is in no respect superior to our own. The hours are longer, and the holidays few. Wages are slightly higher than the same class receive in other occupations, and in the case of certified nurses the pay is increased by about £3 per annum. The prospect of attracting persons of a superior class to undertake the duties in French asylums does not appear bright; indeed, my informant is doubtful whether hospital-trained nurses, so highly valued in this country, are ever likely to be found in France outside the religious bodies whose members have done so much for the sick and suffering in and out of institutions.

In Belgium no official lectures are given by doctors, no examinations are held, and consequently no certificates are granted. A considerable part of the nursing is carried on by members of religious bodies, but there is a fair proportion of lay attendants whose wages are low, hours of duty long, and whose general condition is such that they do not remain at the work for any great length of time.

With regard to the state of affairs in connection with this subject in Germany, it would appear that regulations vary in the different parts and provinces of the empire, but in Prussia the system of training nurses for the insane does not appear to have made much headway. Certificates of competency after examination are not granted, and it is said that there is very little probability of recruiting their nursing staff from a higher grade than the domestic class from which the nurses are now mainly obtained. The wages appear good for the country, the leave liberal, and the hours of duty much the same as our own,

but there does not seem to be sufficient attraction in the service to induce people to remain long, as I was informed that "the majority only put in a very short stay."

Our good cousins on the other side of the Atlantic are more advanced in their ideas concerning the training of their nurses than are any of the countries to which I have just been referring, and in some details we might well learn from them; but taking the general condition of affairs as far as I have been able to ascertain them, the position of the asylum nurse is much the same as in England. The wages are relatively no higher, the leave no greater, and the hours of duty much the same. The training, however, seems very thorough, and extends over two years. During eight months of each year lectures and recitations are given each week, and clinical demonstrations are frequent. Before the nurse enters upon her training she is required to pass the entrance examination, which consists of questions testing her general knowledge and intelligence. Before a certificate of competence is granted two other tests have to be submitted to, a junior and a senior, and as a matter of detail perhaps I may add, as I have so often been told that the questions set for our nursing examination are too numerous, that at these examinations the papers set consist of twelve questions each. The training is not compulsory, but higher pay is offered to those who are willing to improve their condition; and although I have been informed that there is not much prospect of obtaining nurses of a better social standing than at present, yet there seems to have been an improvement in this respect within the past few years, due in some measure to the advance in wages which a trained nurse can demand and obtain, several of the American asylums claiming that the training of the staff has already resulted in securing a better class of applicant, in elevating the general tone of those engaged in the work, and that with greater efficiency came increased remuneration and a corresponding length of service. This, gentlemen, is a consummation devoutly to be wished for in our asylums, and the effect would be so beneficial that no pains should be spared in order to give a full and fair trial to a system which so far promises to be even a greater success than its promoters at first hoped for.

When Dr. Cowles published his paper upon nursing reform for the insane in the *American Journal of Insanity* for October,

1887, but little had been done in the way of offering the asylum nurse the opportunities for training which her hospital sister had enjoyed for some years. It is true that as early as 1879 a class had been commenced at the asylum at Somerville, U.S., and was continued year after year with gratifying success, and lectures to attendants were also given in a few of the Scotch and English asylums previous to 1889; but notwithstanding the efforts of several leading members of this association, notable among whom may be mentioned Doctors Clouston, Rorie, Whitcombe, and Campbell Clark, no considerable extension of the movement in favour of training asylum nurses took place in this country until the year 1890, when a committee, of which Dr. Hayes Newington—our treasurer—was the chairman, reported at the annual meeting held in Glasgow that it was advisable—

I. To institute a system of training attendants in asylums;

II. To establish examinations in order to test the proficiency of candidates; and

III. To grant certificates to those who were successful at the examinations.

The report was received and approved, and after a short delay in order to perfect details, the first examination was held in May, 1891, candidates presenting themselves from the two Birmingham asylums—the sole representatives of England on this occasion—and from three Scottish asylums, namely, James Murray's Royal Asylum, Perth, Kirklands Asylum, Bothwell, and the Stirling District Asylum at Larbert. In November of the same year Morningside, Holloway Sanatorium, the Yorkshire Asylums at Wakefield and Menstone, and the City of London Asylum at Stone, near Dartford, sent in a number of successful candidates, inaugurating a system which has since grown in a manner which must be a source of pride and satisfaction to those who, in the face of friendly opposition, persisted in advocating the great importance of a proper course of instruction for our nurses and attendants in all matters regarding their duties towards and with their patients.

The new system was not in the beginning enthusiastically welcomed by many of those in charge of asylums, but the steady progress which has been made of late years is a silent but eloquent testimony to the fact that a want has been sup-

plied, and in a manner that is becoming yearly more and more appreciated.

Since 1891, 69 English, 19 Scottish, 15 Irish, and 4 colonial asylums have sent up candidates, and it is interesting to note the cautious manner in which this has been done.

During the first year, as has already been shown, 11 asylums only throughout the United Kingdom held an examination; in 1892, 10 other asylums joined our ranks; in 1893, 10 more; in 1894, 20; in 1895, 14; in 1896, 19; in 1897, 10; and in 1898, 13, making 107 in all. The number of certificates issued in the seven years shows a steady increase, thus:

	Males.		Females.		Total.
In 1891 certificates were granted to	45	...	61	...	106
,, 1892 ,, ,,	76	...	101	...	177
,, 1893 ,, ,,	106	...	116	...	222
,, 1894 ,, ,,	195	...	205	...	400
,, 1895 ,, ,,	236	...	234	...	470
,, 1896 ,, ,,	256	...	321	...	577
,, 1897 ,, ,,	263	...	285	...	548
,, 1898 ,, ,,	253	...	341	...	594

—while for the first half only of the present year 603 candidates (278 males, 325 females) have presented themselves for examination, with the result that 519 have been successful, 85 were rejected, and 9 retired from the examination for one reason or another, the total number of certificates granted up to the present time being 3603.

That the method adopted for testing the knowledge of the candidates did not meet with universal approbation soon became evident, and more especially was this apparent to the members of the Educational Committee, to whom the Association delegated the duties connected with carrying out the examinations; but while recognising fully the fact that some alteration was necessary it was felt that, on the whole, it was wiser to go slowly, so that when the fulness of time arrived for modifying the plan first introduced a comprehensive review of the whole question might be entered into, and the opinion of the members of the Association at large taken, who by that time would be in a position to speak from practical experience as to the steps necessary for placing the method of carrying on the examination upon a thoroughly satisfactory basis.

The chief objection to the system, which, by the way, is still

in use, has been felt to be the difficulty of regulating the marking so that no injustice should be done to the candidate by undue severity on the one hand, while strict impartiality should be exercised in cases where the necessity arose for refusing the certificate to those who were not considered to be educated up to the standard which justified the Association in stamping the candidate with the seal of its approval. In order to arrive at a happy medium it has been suggested, and the suggestion has met with the approval of the Association in annual meeting assembled, that independent examiners should be appointed, whose duty it will be to set the questions, to fix a definite standard by which the written answers to the questions shall be assessed, and who themselves shall have the duty of examining the papers of all candidates without the identity of the individual or the place of his training being disclosed. The oral part of the examination is to be carried on as before, save that the "Coadjutor" examiner is expected to take a larger share in putting the questions than it appears the old "Assessor" has done in the past. Personally I had, and still have, the most complete confidence in the way the examinations have been carried out in the past, and while it is quite true that the number of rejections has not been great (the proportion of rejections [15·5] and withdrawals [4·0] for seven years being about 19·5 per cent. of the total number of candidates), yet this result has been due in a great measure to the fact that superintendents and medical officers of asylums have eliminated by previous unofficial examinations the candidates who would otherwise have gone to swell the list of the rejected; and I am convinced that no candidate has received our certificate who has not, in the opinion of the examining superintendent and his assessor, deserved to be so rewarded. At the same time I freely admit that the new system is an improvement upon the old one, and will remove the possibility of any mistakes being made or doubts insinuated in connection with this important particular.

The duration of training—two years *versus* three years—has also been a burning question amongst us, and it was only by a very narrow majority that it has been allowed to remain at the shorter period; but if a close scrutiny of the new arrangement is made, it will be observed that the regulations now insist upon the training being extended over the two years, while under the

old plan, although the duration of service was fixed at two years, it was only essential that the training should be carried on during one of these years. It is earnestly to be hoped that no relaxation of the rule compelling the two years' training in the full sense of the term will be permitted, and that the Educational Committee will see that reliable evidence is produced in all cases to satisfy those who are responsible for the working of the new and comprehensive system which will soon govern the granting of the nursing certificate.

Perhaps before long it will be found possible and expedient to submit the results of each of the two years' course of training to what I might call a junior and senior examination, and I should like to see some method introduced for testing the general education and intelligence of candidates by means of simple questions on subjects a knowledge of which we are justified nowadays in expecting should be acquired in the elementary schools of the country.

When Dr. Hayes Newington's Committee first reported one point was carefully considered, and that was whether special prizes should or should not be given; but it was found that at that time it was "impracticable to centralise examinations, and impossible to so far collate the results as to justify any award on the part of the Association." The Committee, however, "encouraged the granting of prizes by superintendents to the most successful of their own candidates, it being clearly understood that they were merely class honours."

On several occasions, and from superintendents as well as from holders of the certificate, I have had letters suggesting the establishment of a prize examination for which there should be a much-extended curriculum and a more severe test, candidates to be holders of the certificate, and with a longer period of service than is insisted upon for the mere pass examination. That there are many holders of our certificate who would be glad to have some such inducement offered to them to continue their mental training is quite certain, and if the pecuniary and administrative difficulties connected with the establishment of such an examination could be surmounted there is little doubt that good would accrue, not only to the candidates but to the cause of education, which for the sake of its results is the chief point at which we have been aiming.

No mention of the success of this movement would be com-

plete without a reference to the immense amount of good work which has been done in connection with it by assistant medical officers of asylums throughout the United Kingdom. Much of the details of the instruction and training of the attendants and nurses has necessarily fallen to their share, and it is largely in consequence of the enthusiastic and thorough way in which the classes have been conducted and the instruction imparted that the examiners have been able to express their satisfaction with the results when the time arrived for testing the knowledge of the candidates. I am sure I am only voicing the opinion of many superintendents when I say how much we owe to the younger men for the very active interest they have taken in this work.

It has been asked, what have we gained by all this lecturing and training and certificate granting? The reply to my mind is sure and certain. Much has been gained by those at the head of asylums; an increase of their confidence in those who have the direct charge of the patients—a feeling of security which in the old days was wanting—an assurance that the cases entrusted to our nurses and attendants are treated, not as prisoners by warders, but with all the care and skill and attention which a trained nurse can give to a sick patient; and last, though not least, we have gained the knowledge that we are helping in the best possible way to advance the interests and improve the positions of those to whom much of our own success when it comes is due.

But have we improved the position of asylum nurses? Yes, unquestionably. Apart from the fact that in many asylums the committees have recognised the superior value of the services of trained nurses by an increase in their emoluments, there has been (what now and then may perhaps have aroused an ireful feeling in some of us) frequent instances of promotion to higher and better paid posts, especially in connection with the lunatic wards of workhouses, where the recent action of the Local Government Board in insisting upon a more thorough system of nursing in such establishments has produced a demand for our certificated nurses which has occasionally been productive of temporary inconvenience in some asylums, but in course of time, as the unusual vacancies which have recently occurred are filled up, we shall only have that steady transfer from the

asylum wards to other positions which is sometimes rather an advantage than otherwise.

A large and growing demand for our trained nurses also exists in connection with the nursing institutes which abound in most of our large towns, some of whom refuse to accept applicants who are not holders of our certificate; and the advantage of such training to those who as a rule devote themselves to ordinary sick nursing is being more and more recognised as time goes on.

Without going so far as to say with pessimists like Hobbes that selfishness is the mainspring of human action, it may be stated that with the majority of people the prospect of material advantage administers a spur to industry and a tonic to integrity such as few other things will do. Dr. Cowles wrote years ago, "We cannot go against nature. We must take healthy human nature as we find it, and make use of the common principle of wholesome self-interest as an instrument for our purpose." And so we must be content to feel that though at times the results of the efforts made to train and improve the position of our nurses and attendants would appear to deprive us of respectable and trustworthy assistants in our own work, yet the greatest good of the greatest number is in this the supreme law; and thus not only do we benefit the trainers and the trained, but the general public gain an incontestable advantage by having provided for them in the hour of their need reliable and experienced nurses, upon whose skill both doctors and friends may depend in the ofttimes discouraging and difficult work of steering a patient successfully through an attack of mental illness.

Dr. SAVAGE: It is well understood that no discussion can follow a presidential address, but having been called upon to speak, I feel that we have listened to a model address. It recounts the losses we have sustained; and those of us who have been long connected with the Association cannot but feel that those who have passed from us, and who have been referred to so kindly, were men who have been memorable to us. But Dr. Spence also looks forward hopefully to the future, and we regard him as a President who will bear out what he has to-day laid before us. We recognise in him one of the principal helpers in the teaching and improving of the nursing

staffs of our asylums. He has been, indeed, the machine that has been grinding hard and fine for the welfare of these nurses, and we all recognise that it required some one with determination and with courage to carry out that work. Dr. Spence has now given a wonderfully happy account of what has been accomplished, and has fully justified the Association in the selection of him for the duties of President. He has referred to legislation. I fancy that if legislation would leave us alone we should be rather the happier. Some of the legislative proposals of the year would have been useful, and some would not. Our legislators are hardly educated enough; they require much of Dr. Spence's training to know what is required. He has referred to epileptic colonies and the very important question of tuberculosis; but I have already said enough to show my own feelings, and I am sure that I may express the heartiest thanks of this meeting to Dr. Spence for the most suggestive and able address which he has just delivered.

Dr. ROGERS: I have been asked to second this vote of thanks. It gives me much pleasure, after an absence of many years, to cordially support what Dr. Savage has said, to see the Association still going on quite as well as in the old days, if not better. I feel somewhat in the position of Rip van Winkle —coming back expecting to find everything as I left it; however, instead of finding a lot of fine old men I find a lot of fine young men. As long as we are represented by gentlemen like our present President I feel that the reputation of the Medico-Psychological Association will continue to flourish.

Dr. URQUHART having put the resolution to the meeting, it was received with acclamation. He congratulated Dr. Spence, and conveyed to him the thanks of the Association for the very able and instructive and characteristic address which he had given. The history of the nursing of the insane required to be brought up to date, and he had done it in such a way as to constitute an authentic history of later developments in that domain of philanthropic activity. (Great applause.)

Dr. SPENCE: I wish to thank you very much for the vote of thanks, and take this opportunity of saying how much I regret giving up the office of Registrar. It brought me into contact with a large number of superintendents and medical officers, and a pleasanter set of men to deal with I cannot imagine. During the seven years I have been Registrar I

have never had a single unkind word from those with whom I have had so much to do, and considering that sometimes one had to be rather strict, it is something to be able to say that they have treated me so handsomely. I look upon my position in the Chair here to-day as a reward, though I must add I am greatly overpaid for the little I have done.

The Frequency, Causation, Prevention, and Treatment of Phthisis Pulmonalis in Asylums for the Insane; Essay for which was awarded the Bronze Medal of the Medico-Psychological Association, 1899. By F. G. CROOKSHANK, M.D.Lond., lately Assistant Medical Officer, Northampton County Asylum.

I. THE FREQUENCY OF PHTHISIS AS A CAUSE OF DEATH AMONGST THE INMATES OF ASYLUMS.

WE are, for obvious reasons, forced to gauge the prevalence of phthisis in asylums by its mortality. Several questions at once present themselves:

What is the mortality from phthisis at the present time in the British Islands? What is the mortality from phthisis in the asylums of the British Islands?

Are these mortalities diminishing or increasing? And what relation do they bear to one another?

It is easy to propound these questions; it is extremely difficult to properly appraise the available data. For, first, if it be desired to compare the mortality from phthisis of asylum inmates with that of the general population, the comparison must be made on the basis of the ratio, in each case, of the annual deaths from phthisis to the average populations involved. In other words, the phthisis death-rate, and not the percentage of deaths assigned to phthisis, must be estimated.

Unfortunately most asylum statistics prior to 1870 were based on the percentage of total deaths due to phthisis. It is obvious that, owing to the relatively high mortality from all causes in asylums, the phthisis mortality indicated by such

statistics is very much less than the real phthisis mortality. But, unless the death-rate from all causes is known to vary considerably in the asylums concerned, it is not unfair to compare the phthisis mortality of different asylums, and of the same asylums at different periods, on the basis of the calculated percentage of deaths due to phthisis.

If, however, any just arithmetical comparison is to be made between the phthisis death-rate of the asylum community and that of the general population, correction must be made for age and sex distribution. If not, the comparison presses unduly on the asylums, for the population of asylums is practically a population between the ages of fifteen and seventy-five, the age of phthisis incidence.

Again, in asylums there is an enormous incidence, as a cause of death, of disease of the nervous system. Such incidence obviously masks the true incidence of other causes of death. On this point some cogent remarks were made by the Scottish Commissioners in their Report for 1873. Again, in the asylums of England and Wales there occurred, during 1897, 7298 deaths ; of these, 1064 were assigned to phthisis, 76 to tuberculosis, and 6 to scrofula (*sic*); 1385 deaths—19 per cent. of the whole—were assigned to general paralysis. Since, on an average, 1457 general paralytics are admitted annually to these asylums, it seems likely that this number 1385 includes almost all the general paralytics dying in them during 1897.

Now Clouston found that of 97 general paralytics who died 27 were phthisical, and Mickle has stated that of general paralytics examined after death, 26 per cent. exhibited caseation or cavities, 12 per cent. "cured" phthisis, and 65 per cent. pleuritic adhesions. So of these 1385 general paralytics dying in 1897 many must have been far gone in phthisis.

It is misleading, then, to say that of 7298 deaths 1064 only were due to phthisis. Deducting, as is only fair, deaths assigned to general paralysis from total deaths, we find that of 5913 deaths 1064 at least were due to phthisis. By a parity of reasoning, allowance should be made for, at any rate, some of the 267 deaths assigned to "exhaustion," and the 512 to "organic brain disease," having been due to or accelerated by phthisis.

Whatever allowances might thus be made in calculating the percentage of deaths due to phthisis, it is obviously difficult to

ascertain the true—as distinguished from the "official"—phthisis death-rate; for, owing to the relatively short duration of their asylum life, it would not be sufficient to deduct from the average resident population the average number of general paralytics resident.

Owing to the system of classification adopted by the Commissioners in their tables and the necessity imposed upon superintendents of stating only one cause of death on the certificates, many more deaths from phthisis are, for statistical purposes, lost. No mention, for instance, is made at all in the Commissioners' tables of tubercular meningitis, peritonitis, nephritis, or enteritis. Since in 1897 alone 94 deaths were assigned to "congestion of the lungs"—a meaningless phrase, 34 to peritonitis—a disease never idiopathic, and 57 to meningitis—a disease rarely, if ever so, there seems little doubt that certain cases in which the fatal issue is due to a complication of phthisis, are as we have said, for statistical purposes, lost under various headings.

It would be difficult from these data alone to estimate the degree by which the official returns under-estimate the true phthisis mortality in asylums, but, by an examination of post-mortem records of various asylums, some help may be gained. It is well known that phthisis is, in the insane, often latent, or at any rate unrecognised. It is equally well known that—be the reason what it may—phthisis does not appear on the death certificates so often as it is found post mortem in so advanced a stage as to cause death. Death is assigned instead to general paralysis; "brain disease," "enteritis," and so forth. According to Clouston, phthisis is found post mortem at least twice as often as would appear from the certificates.

At one county asylum in which the reported proportion of deaths due to phthisis has been for years about 11 per cent., advanced phthisis has been found in 20 per cent. of the complete autopsies made since 1888.

There is good reason to suppose, then, that the true phthisis death-rate of asylums, is something not much less than twice the "official" rate. It is certainly half as high again.

It is clear that we can hardly hope to institute a just arithmetical comparison between the phthisis mortalities of the asylum and general populations; nor shall we be able to until some return is issued, from the Board in Whitehall, of the total

number of deaths of which phthisis is either the immediate cause or the pathological antecedent of the immediate cause.

Since official returns so grossly under-estimate the phthisis mortality of asylums, it is not easy to answer the questions we have proposed. However, from the very valuable report made by Dr. Tatham to the Commissioners appointed to inquire into the relation of tuberculosis to the food supply, it appears that during the quinquennium 1891–5 the phthisis mortality in England and Wales was, per million living at all ages, 1463 (Table VI, Appendix A). The age period of greatest mortality during this quinquennium was that of males between thirty-five and forty-five. In this group the mortality was per million 3268 living.

Table I, Appendix A (compiled from official sources), shows that the phthisis mortality in the asylums of England and Wales was in 1894, 14·1 per thousand of the average resident population. In the years 1895, 1896, and 1897, the rates were 15·7, 13·7, and 14·7 respectively. Figures (also extracted from the official returns) show that in the same years the phthisis death-rate was in Irish district asylums considerably greater, and in the Scottish and London county asylums distinctly less (Tables II, III, and IV, Appendix A).

Dr. Tatham has kindly informed me that the "number living" of his tables is strictly analogous to the average resident population of an asylum. It will be convenient then to present in tabular form these two series of facts.

I.—*Phthisis death-rate* (*per 1000 of the Average Resident Population*).

	1893.	1894.	1895.	1896.	1897.
All Asylums, England and Wales . .	—	14·1	15·7	13·7	14·7
Irish District Asylums	24·8	25·7	19·6	18·5	23·9
All Scottish Asylums	11·0	10·5	11·2	11·6	10·4
London County Asylums	12·6	9·5	12·1	8·5	9·8

The "official" death-rate from phthisis is, it would appear, on an average 14·6 per 1000 of the average resident population (in English asylums). This is ten times that for the general population of England and Wales (1891 to 1895).

II.—*Phthisis death-rate (per 1000 living) for England and Wales.*

	All ages. Both sexes.	35—45 (Female)	35—45 (Male)
Quinquennium, 1891—1895. . .	1·463	2·305	3·268

We have already mentioned the difficulties attending attempts to institute arithmetical comparison.

No secondary considerations, however, can impair the force of the fact that the "official" death-rate from phthisis in the asylums of England and Wales is 4·5 *times as great as that of the age group of the general population most liable to phthisis. Males between the ages of thirty-five to forty-five.* And we have shown reason to believe that this rate is too low by a third if not by a half.

It will not escape notice that the phthisis mortality in Irish district asylums is, on official showing, more than half as great again as that in English asylums. Without attempting to deny that phthisis is extraordinarily prevalent in Irish asylums, it may be pointed out that in Ireland only 4 per cent. of the deaths in asylums are assigned to general paralysis; while in England and Wales general paralysis accounts for 19 per cent. of such deaths. Since at least 25 per cent. of general paralytics die with advanced phthisis, it is obvious that the official returns, as at present made, press unduly on the Irish asylums in this matter.

It is not easy at first sight to account for the relatively low phthisis mortality in the London county asylums. These asylums receive a debilitated class of patients, and cannot be said to be free from over-crowding. But it appears that large numbers of the London insane—and certainly not those most robust—are accommodated in provincial asylums. On January 1st, 1898, 1284 such persons (11 per cent.) were so boarded out, and it has been hinted that the principles of selection of such patients tend to encourage the boarding out of phthisical cases. The low death-rate of Scottish asylums is to be otherwise accounted for. But it may here be pointed out that the mortality from tubercular disease in Scotland is relatively greater than in England (Table IV).

It is well known that phthisis, as a cause of death, is in the British Isles, steadily lessening in importance. The tables furnished by Dr. Tatham formed the basis of some remarks in the Report of the Royal Commission on Tuberculosis (1898). The Commissioners stated, "that these figures—after every allowance has been made—show that the mortality from tubercular disease (in all its forms) has steadily fallen since 1851 to 1860, and that every age period for which statistics are available shows a decrease often considerable." Dr. Tatham finds that "comparing 1891 to 1895 with 1851 to 1860 . . . . phthisis mortality in males of all ages has been reduced by about one third, and in females by more than one half."

The subjoined table is extracted from Dr. Tatham's elaborate returns.

III.—*Mortality per 1,000,000 living, all ages (England and Wales).*

	Phthisis.	All tubercular diseases.
1851-60	2679	3483
1861-70	2475	3240
1871-80	2116	2863
1881-85	1830	2540
1886-90	1635	2322
1891-95	1463	2122

Dr. Arthur Ransome, on statistical grounds, concludes that a decline in the phthisis death-rate of England and Wales has existed since 1838 at least; that this decline is a slightly increasing one, and that, if phthisis as a cause of death continue to diminish at the same rate for another thirty years, it will, at the end of that period, have entirely disappeared.

Mr. Malcolm Morris has pointed out that from Dr. Ransome's charts it appears as if the first great drop in the phthisis death-rate occurred in the decade 1840–50—the period in which serious attention was first given to sanitary reform.

It may also be observed that the decline has been particularly marked since 1867, a fact to which we will presently refer. From some data that have been put forward by Dr. Chalmers, it appears that the death-rate from tubercular disease in Scotland has diminished in the last forty years by about a third—to

be precise, by 35 per cent.—a rate of reduction greater by about 4 per cent. than that obtaining in England and Wales during the same period.

IV.—*All Tubercular Disease: Mortality per 1,000,000 living.*

	England and Wales (Dr. Tatham).	Scotland (Dr. Chalmers).
1861–70	3240	3814
1871–80	2863	3552
1881–85	2540	2936
1886–90	2322	2578
1890–95	2122	2446

It appears from Dr Chalmers' investigations that this reduction has been particularly marked in the case of phthisis, which disease, in Glasgow at any rate, accounts for 72 per cent. of the deaths from tuberculosis. The results of Dr. Tatham's investigations are then in close agreement with those of Dr. Chalmers.

It remains for us to ascertain, if possible, whether the phthisis mortality in asylums has decreased during the periods investigated for the general population by Drs. Tatham, Ransome, and Chalmers. We are, at the outset, confronted with the grave disadvantage that only since 1894 have the causes of death in English asylums been officially tabulated. Vague statements are met with in medical literature to the effect that in the early part of the century, and, indeed, as late as 1850, the deaths from phthisis in asylums amounted to nearly one half the total deaths. Since the death-rate in asylums from all causes was formerly far higher than at present, we are justified in assuming that since 1850 a considerable decline in the phthisis mortality of asylums has occurred.

Dr. Clouston, for instance, has stated that in the Royal Edinburgh Asylum, between 1842 and 1863, 29 per cent. of the deaths were due to phthisis. Since 1879 the percentage has been much lower; from 1879 to 1888 it averaged 13·6. This percentage is indeed lower than that of English asylums at the present time (Table I, Appendix A). It must, however, be pointed out that in the early records of individual asylums the tendency to statistical loss, so marked a feature of the Commissioners' returns, did not then obtain to the

extent it does now. General paralysis as a cause of death excited less attention fifty years ago than it does now. Certainly no motive existed to depreciate the phthisis mortality. But, after all, what we chiefly require is evidence of the decline, if any, of phthisis mortality in asylums since 1865–70, the time at which bacteriological opinions first became current and from which the decline in phthisis mortality for the whole population has become so notable. Happily much valuable information can be obtained from the Scottish Blue Books. This information is summarised in Table V, Appendix A. The figures given in this table, as indications of the absolute phthisis mortality, can only be received with the reservations we have already declared; but they do afford us evidence of the "official" mortality in successive quinquennia.

It appears that, while on official returns, the phthisis mortality for males in Scotch asylums from 1870–74 averaged 11·2 per 1000, in 1890–94 it averaged 10·9—a reduction of 2·7 per cent. In the case of females a greater reduction is apparent, the rates being 15·9 and 11·1 respectively. But if we compare the years 1875–79 with those of 1890–94 we find the reduction has been in the case of males 1·78 per cent., and for females 6·7 per cent. Since 1871–80 the reduction in mortality from tubercular disease for the whole of Scotland has been 31 per cent.

In England the reduction of mortality from phthisis alone has been since 1861–70 over 40 per cent., and since 1871–80 about 31 per cent.

Moreover, from Table III, Appendix A, it seems clear that the later tendency of the phthisis death-rate in Scottish asylums has been, till 1897, to rise.

It is difficult, in default of such returns as those issued by the Scottish Commission, to find any trustworthy data from which to draw conclusions as to the phthisis mortality in English asylums during the last forty years. Statistics of individual asylums abound, but are necessarily of little value, even when, as is too seldom the case, they are calculated on the basis of the average resident population. It is perhaps worth mentioning that at Garlands, from 1864 to 1894, "tubercular diseases" accounted for but 15·3 per cent. of the total deaths; in 1897 phthisis alone accounted for at least 15·6 per cent. of the deaths in English asylums (Table I, Appendix A). No

doubt if the individual reports of the various asylums of England and Wales were collected, some facts would be obtained, but the difficulties of such a task would be great. As before 1880 many asylums reports were inadequate and the causes of death very crudely classified, the results would be disappointing. But between 1870 and 1880, the Commissioners published —in their reports on individual asylums—tables of the causes of death "since last visit." These reports have been collected and the results summarised in the accompanying table. Only those reports have been utilised in which phthisis (or "consumption") is classed alone as a cause of death. (In many instances deaths were grouped as due to "pulmonary disorders," etc.) The "years" given refer to the years in which the reports were made; of course many of the deaths "since last visit" occurred in preceding years. In some years very few deaths were classified. In the right hand columns are given the official death-rates (from all causes) in the asylums of England and Wales during the year of the visits, and an "approximate" phthisis death-rate; but the possible error in this last must necessarily be large. Below are placed for comparative purposes, some recent statistics:

V.—*Phthisis Mortality in various English Asylums*, 1870—1880.

Year.	Deaths classified.	Deaths from phthisis.	Percentage of deaths due to phthisis.	Death-rate in all asylums (all causes).	Approximate phthisis death-rate.
1871	1051	180	17·2	102·1	17·5
1873	1288	231	17·9	101·6	18·1
1876	2324	316	13·1	100	13·1
1877	2563	319	12·7	99	12·5
1878	1119	160	14·3	100	14·3
1879	1290	175	13·5	100·4	13·5
1880	805	85	10·5	91·09	9·5
1895	7182	1135	15·8	99·9	15·1
1897	7298	1140	15·6	94·5	14·7

It would appear from this table, imperfect though it be, that in the early seventies the phthisis mortality was distinctly higher than in later years. It also seems that of late years,

although the death-rate from all causes has sensibly declined, the percentage of deaths due to phthisis has increased in rather greater proportion. In other words there appears to be an arrest of the decline in the phthisis death-rate, if not an actual tendency to increase (cf. Table I, Appendix A). These conclusions are in substantial harmony with those arrived at from the study of the Scottish Blue Books (Tables III and V, Appendix A). Moreover, Table II certainly shows no settled tendency to decline in the phthisis death-rate of the London county asylums. Without exaggerating the value of these various tables, it is thought that they afford basis for several conclusions which may be briefly stated :—

The "official" death-rate from phthisis in English (and Welsh) asylums is 4·5 times as high as the phthisis death-rate for males between the ages of thirty-five and forty-five. Males between thirty-five and forty-five constitute the age group of the general population most liable to death from phthisis.

This "official" death-rate under-estimates by a third at least the true phthisis mortality in asylums. The death-rate from phthisis in Irish district asylums is, in part from circumstances already dwelt on, 50 per cent. higher than that in English asylums.

The phthisis death-rate in Scottish asylums is about 20 per cent. lower than that of English asylums, notwithstanding the fact that tubercular disease is in Scotland more prevalent than in England.

The mortality from phthisis of the general population of England and Wales is being reduced annually at a rate which tends to increase. This reduction has, since 1871–80 (Table VI, Appendix A) amounted to over 30 per cent.

A similar reduction appears to be occurring in the phthisis mortality of the general population of Scotland.

There appears no ground for assuming that in the last twenty years there has been, on the whole, any fall in the phthisis death-rate of English asylums ; but a certain fall did probably occur in the early seventies.

The phthisis death-rate in Scotch asylums, which also fell in the early seventies, has only slightly declined during the last twenty years (1·5 to 6·7 per cent.).

Perhaps in Scotland, certainly in England, some tendency exists at present for the phthisis death-rate of asylums to rise.

It does not appear that the relatively low phthisis mortality of the London county asylums tends to further decrease.

II.—The Causes of the Excessive Mortality from Phthisis amongst the Inmates of Asylums.

The high phthisis death-rate that prevails in asylums admits of two explanations. One is that the insane are, as insane persons, peculiarly liable to phthisis. The other is that the insane become phthisical because the conditions of asylum life favour the development of phthisis.

Unfortunately, we are unable to compare the phthisis mortality of lunatics under care as single patients with that of lunatics confined in institutions. It certainly is the case that, of admissions into asylums, a relatively large number are already phthisical, and a still larger number possess hereditary tendencies to become so. But Dr. Clouston found that of 140 instances in which phthisis was the cause of death, in only 21·5 per cent. was the disease diagnosed within twelve months after admission. In other words, four fifths *at least* of these cases contracted phthisis after admission to the asylum.

I have been at some pains to examine the records of a county asylum in which very careful physical examination and note-taking have always been practised. Of the last 1000 cases admitted only 85 warranted, on admission, even suspicion of phthisis. In not a few instances the sequel has shown these suspicions to be unfounded. But during the period covered by these 1000 admissions advanced and active phthisis was noted in 20 per cent. of the autopsies made; old phthisis and apical adhesions in a much greater number. Since the discharge rate of cases suspected on admission of phthisis was practically that of non-tubercular cases, it is quite clear that, even with a generous allowance for oversight, a very large number of cases acquired phthisis after admission. The exact number, however, for the asylum world at large will not be determined until the Commissioners require notification of all cases admitted with phthisis. The addition of one or two words to the certificates now sent to Whitehall on admission of a new case would suffice.

It is exceedingly difficult to estimate the number of cases

admitted in which an hereditary tendency to phthisis exists. The inaccuracy of statements made by relatives is well known, and it is not easy to say what is evidence of hereditary predisposition. From my own observations it would seem that not *more* than 7·5 per cent. of cases admitted are phthisical, and that in about 10 per cent. a family tendency exists. These conclusions do not disagree with those of others who have paid attention to the subject.

We have seen that in English asylums about 15·5 per cent. of deaths are officially assigned to phthisis, and that in at least 20 per cent. of fatal cases advanced phthisis exists, while in from 30 to 40 per cent. some signs of tubercular deposit in the lungs may be traced. It is hard, then, to avoid the conclusion that in the majority of instances phthisis is contracted after admission to the asylum.

The question of hereditary predisposition tends rather to obscure the point at issue. If a patient admitted free from disease contract phthisis in an asylum the fault lies with the institution harbouring the germs. It is no excuse that the person infected has "family tendencies." The responsibility is great of those who, assuming charge of predisposed persons, place them in directly disadvantageous circumstances. It is difficult to substantiate the theory put forward by apologists for the asylums that in an insane person there is, *quâ* his insanity, some subtle tendency to phthisis. If it were so Dr. Chapman could not have written in 1874: "No death has occurred from phthisis (in Hereford Asylum) except one case of tubercular disease in a man dying of general paralysis two months after admission. Phthisis so commonly originates in asylums that there is good ground for supposing this immunity may be ascribed to the original capacity of the building and to the care bestowed on hygienic measures." And in 1875: "My experience leads me to think that phthisis is a preventable disease in asylums. I attribute its absence at Hereford to ventilation, freedom from over-crowding, dietary, and exercise."

There is, however, one peculiarity of the insane or of certain classes of the insane, which directly predisposes them to phthisis —the shallowness and infrequency of respiration in depressed and demented cases. No doubt the vitality of the insane—especially the pauper class—is low, but the proscription to them

of fresh air is a detail of asylum management; no doubt their nutrition is poor, but it is childish to assert that half-a-crown or less per week is enough to spend on food.

How far do the conditions of asylum life determine the spread of phthisis amongst the insane? The chief cause of phthisis is the *Bacillus tuberculosis* in force sufficient to overcome the defensive resistance of the bioplasm of the individual attacked. And this organism must gain access to the body by inoculation, ingestion, or inspiration. Tuberculosis in the human subject is very rarely the result of inoculation. Tuberculosis from ingestion of tuberculous meat and milk is unfortunately more common. But, as the Royal Commissioners pointed out, it is the tuberculosis of childhood—abdominal tuberculosis—that is so brought about. *Phthisis* from food is rarely met with. When it is the case usually runs a rapid course, affection of the lungs being secondary to infection of mesenteric and retroperitoneal glands. There is no reason to suppose that such cases occur more often in asylums than amongst the general population. But chronic pulmonary tuberculosis is nearly always due to infection by the respiratory tract.

It is hardly necessary to give authority for a statement, the truth of which is generally admitted, that the judicial utterances of the Royal Commission may once more be alluded to (Report, Part I). This statement does not, of course, mean that phthisis is communicated by *direct* infection. It means that the *materies morbi* is disseminated by the drying of promiscuously voided sputa, and is respired with dust.

Sir William Broadbent has put the matter clearly in a few sentences:—"Consumption is a contagious disease; it is communicated from person to person and . . . it arises in no other way." "The principal way in which they (germs) are conveyed . . . is by means of the expectoration which contains them in enormous numbers, and which, when dried, is suspended in the atmosphere . . . . in the form of dust and inhaled."

Surely it would be difficult to find institutions which afford such opportunities for the dissemination of phthisis germs as do our asylums. Consider a community existing under conditions that preclude, for many, adequate exercise in the open air; spending long hours in over-crowded day-rooms and dormitories; a community of filthy and careless habits, and already

phthisical in the proportion of from 15 to 25 per cent. Such a community is formed by the inmates of every county asylum.

Over-crowding may exist in workhouses, in infirmaries, in Whitechapel sweating dens, and in the slums of Somers Town; but nowhere, save in asylums, are there such aggregations of tubercular persons whose malady is complicated by persistently uncleanly habits. Chemical disinfectants cannot be generally employed; and the drying of sputa is hardly to be prevented. Small wonder surely that farm labourers, taken from the plough and placed in a crowded ward, so often die of phthisis in a year or two.

What are the causes which weaken the defensive powers of the body against these organisms? Certain conditions of soil dampness and inefficient drainage, certain conditions of life in valleys and deficient sunlight, all these have an evil influence. But though asylums, no less than other institutions, have profited by the work of the sanitary engineers, during the last twenty years the phthisis mortality of asylums has been only slightly reduced. Why, then, has the phthisis mortality of asylums remained so high?

In great part we have answered this question by pointing to the opportunity afforded for the dissemination of spores under asylum conditions, and there are three other factors which directly tend to lower the resistance of the insane to the *Bacillus tuberculosis*, over-crowding, lack of exercise in the fresh air, and a certain quality of diet.

There is no doubt that *over-crowding*, besides directly increasing the possibility of infection, brings about a condition of low vitality strongly predisposing to phthisis. To quote the words of Dr. Theodore Williams: "It has been demonstrated over and over again that impure (rebreathed) air is the principal debilitating cause which renders the individual vulnerable to the attack of the tubercle bacillus." "Immunity from phthisis is almost invariably associated with more or less open-air life."

To what extent does over-crowding prevail in the asylums of the United Kingdom? Parkes laid it down—and the accuracy of his calculations is still unshaken—that an average healthy adult needs per hour 3000 cubic feet of air. In our country it is difficult to change the air of living or sleeping rooms more than three times an hour without risk of chill, and

so the least space allotted to each person should be 1000 cubic feet. For hygienic purposes, it is agreed, a room of this space should not be more than 12 feet in height. A ventilated room of 40 square feet in area and 20 feet in height is not, in hygienic value, the equivalent of one 10 feet in height and 80 square feet in area. Every adult then should be allotted, in sleeping and living rooms, 83 square feet of floor space at least. Parkes also laid it down that, to infirmary patients, 1000 to 1300 cubic feet (83 to 108 square feet of floor space) should be allotted. Dr. Acland showed, many years ago, that for nursing purposes the *minimum* floor space ought to be 72 square feet per bed.

It may be said that these are counsels of perfection. No doubt ; our standard should be that which ought to be, not that which is.

How far does the provision for lunatics in England and Wales fall short of this standard of Parkes'?

The Commissioners in Lunacy for England in their tables assume that in ordinary dormitories 50 square feet, and in sick dormitories 66 square feet, is sufficient floor space per bed. That is to say, if every dormitory be supposed to be 12 feet high and the air changed thrice hourly, 1800 cubic feet of air per hour is allowed to ordinary and 2376 cubic feet for infirmary patients.

It is true that in the tables of the Commissioners only dormitory space is *calculated*. It is "assumed" that in each "single room" only one patient sleeps and that the cubic space is adequate. But in how many single rooms is the supply of air per hour actually as much as 1800 cubic feet, the amount the Commissioners deem adequate? Under the most favourable circumstances, the floor space allowed by the Commissioners corresponds to only 1800 cubic feet of air per hour for ordinary patients (instead of 3000), and for sick patients to only 2376 instead of the needed 3000 to 4000. On their own estimate over-crowding existed, on January 1st, 1898, in 36 out of the 77 county and county borough asylums. In these 36 asylums there was, on the estimated dormitory and single room accommodation, over-crowding to the extent of 1486 persons.

It must be insisted that this allowance of the Commissioners, meagre as it would be for healthy persons, is actually supposed to be adequate for a community confined to institutional life

and of which from 15 to 25 per cent. at least are tuberculous! And of which it is said that a still greater number are predisposed to phthisis!

So much for the dormitory accommodation. Is the day room accommodation any better? Absolutely no official figures are provided.

It may be again pointed out that the tendency during the last few years of the phthisis mortality in English asylums has not been to fall (Table I, Appendix A). The average resident population of asylums in England and Wales has risen from 71,682 in 1895 to 77,217 in 1897. The accommodation has not increased in the same ratio. On the Commissioners' calculations there was on January 1st, 1896, sleeping room in the county and county borough asylums for 1932 more patients than were actually resident. On the 1st of January, 1898, there was room for but 715 more. On January 1st, 1896, 31 of these asylums were over-crowded, on January 1st, 1898, 36.

We have some explanation of the relatively low phthisis mortality in London county asylums in the fact that in them, owing to an extended system of boarding out, over-crowding is not increasing so rapidly as the number of patients. Unfortunately it is impossible, in the absence of official statistics, to gauge the over-crowding of Scottish and Irish asylums; but it may be pointed out that in Ireland, where the asylum population is increasing more rapidly than in England, the phthisis rate is high; and that in Scottish asylums, where the reverse is the case, the phthisis rate is relatively low.

It does appear, then, that the phthisis death-rate of asylum groups may be definitely correlated with the density of asylum populations.

There is little need to insist on the advantages, for those confined in asylums, of *exercise in the open air*. Necessarily many, by reason of infirmity, or the form of their disease, are precluded from participating in the "walks" now so generally arranged by asylum superintendents.

But it should be remembered, when allotting day-room and dormitory space, that of asylum patients in England and Wales (County and County Boroughs) 19·6 per cent. are restricted to airing courts for exercise and only 39 per cent. pass daily beyond them (Blue Book 1898).

The food in these institutions is no doubt wholesome, and for robust individuals sufficient. But, by a study of diet tables, one is driven to the conclusion that, for persons many of whom are drifting into dementia and struggling with the tubercle bacillus, it is in certain asylums inadequate, and deficient in fat.

No doubt in many ways the diet of the asylums is as good, if not better, than that of many agricultural labourers. But we insist that too often it is not calculated to strengthen the defensive powers of the bioplasm of a melancholiac living under the greatest restrictions, restrictions imposed by his malady and by social necessities.

It appears then, that though many persons are admitted to asylums in various stages of phthisis, yet in the majority of cases in which phthisis leads to a fatal issue the disease is acquired in the asylum.

By reason of hereditary tendencies, or peculiarities of respiration, many insane persons are vulnerable to the tubercle bacillus. But the immediate cause is, in all but a few instances, that inhalation of spores which is a necessary consequence of the usual unenlightened practice of allowing phthisical cases to mingle with non-phthisical persons. Further, since overcrowding is a recognised factor in producing states of low vitality, undoubted responsibility attaches to those who allot insufficient fever-space for a feeble and infected group of person.

It is obvious that restricted opportunities for open air exercise render necessary sleeping and living room space above the proper standard, and the provision of a dietary relatively rich in fats.

III.—The Prevention and Cure of Phthisis amongst the Inmates of Asylums.

Two questions seem to be suggested by the conclusions already arrived at. (1) What can be done to prevent the infection of sound patients? (2) What can be done to arrest the progress of disease in those already infected?

Apart from the ethical motive, there are reasons of economy. A lessened phthisis mortality means—though no doubt in a lesser proportion—a higher recovery rate, at least among the

patients free from phthisis on admission. But it also means a reduction of the number of sick patients and some check on the present waste of patients capable of profitable labour. Of course every measure that tends to prolong the lives of the insane adds to the aggregate burden on the public. But every measure reducing the mortality and sickness of the insane tends in the long run to economy of asylum management.

Three plans may be suggested in the interests of the uninfected patients.

The first, based on a recognition of the advantages of ample air, space, and generous dietary, would practically result in the conversion of asylums into institutions of the type of our hospitals for consumption, institutions such as that at Brompton. It has been demonstrated, time and again, that in these institutions, if proper measures of disinfection be enforced, no risk of infection is incurred by the non-tubercular inmates. It is obvious that this plan would necessitate the doubling of our asylums in size. Only one person could live where two or three do now. It is not the most economical plan, and is not that suggested by our latest knowledge.

The second plan—advocated some few years ago by Sir J. Crichton Browne—involves the provision of a block to be used as a consumption hospital in connection with each asylum. This plan, embodying as it does the principle of isolation, is a distinct advance on the first one. But it seems inadequate. It makes no provision for recently admitted cases of mental disease complicated by phthisis. And in practice, for it has been tried, the hospital degenerates into an infirmary for such consumptives as keep their bed and are quiet.

The third plan enjoins the segregation of every case of tubercular disease, whatever the mental condition of the patient. The application of this plan must, with certainty, result in a decline of the number of cases acquiring phthisis in asylums. It should lead to the attainment of what we must recognise as our ideal—the disappearance of phthisis as a cause of death amongst patients free from the disease on admission.

It may be urged that in practice this plan would break down; that early cases would be overlooked; that sources of infection would still persist in the general wards. It is true that phthisis is, in the insane, frequently latent. It is also overlooked although these patients may not complain in them, as in the sane,

with febrile processes the pulse beats faster and the thermometer rises. Although physical examination is often difficult, insanity will not abolish the flattening of a cavernous apex or a the dulness of a consolidated base, and an impaired percussion note is the earliest and most trustworthy physical sign of phthisis.

If every patient were weighed once or twice a quarter, and if every patient losing weight were carefully examined, very few cases would be overlooked.

Thus far, then, in the interests of the uninfected :—

(i) Every patient exhibiting signs of tuberculosis in any form should be, whatever the mental condition, at once removed from all communication with uninfected patients.

(ii) At the same time every effort should be made to narrow the possible margin of error, by approximating the conditions of asylum life to those generally recognised as defensive against phthisis, and by enforcing modern practices of disinfection and sterilisation.

What provision should be made for the segregated (infected) cases? The answer is bound up with that to our second question :—What can be done to arrest the progress of disease in those already infected? A few years ago it would have been said that some modification of the Brompton Hospital plan afforded the greatest hope of relief to phthisical persons unable to leave this country. But if the principle of separation is to be rigorously applied, it is obvious that this plan must be greatly modified. The persons for whom provision must be made are not only quiet cases but persons exhibiting every phase of mental disorder requiring asylum treatment. Of late the general opinion is that the most hopeful plan of dealing with phthisical persons is that indicated by the term "sanatorium treatment." Dr. Rufenacht Walters has well said : "To write on the sanatorium treatment of consumption is to preach to the converted ; it is the logical outcome of facts which cannot be disputed, and of principles which are universally accepted by the medical profession."

Inasmuch as the population of a "sanatorium" consists of persons of almost every grade of bodily activity, it would seem that the conditions of asylum life could be more easily reconciled with those of a sanatorium than those of a hospital. Most modern authorities—notably Dr. A. Ransome and Léon Petit—have declared that the advantages of the so-called cli-

matic treatment of phthisis are those of residence in the open air simply. And Sir Samuel Wilks has said, "The remedy for consumption is air, air, fresh air."

Lastly the results that have already been obtained by Dr. Burton Fanning and others sufficiently demonstrate the potentialities of sanatorium treatment in the British Isles. The necessary conditions, according to Petit, Walters, and others, are :—Pure air ; not in close proximity to large towns. Sandy soil without damp, or fog after sunset. Free exposure to the sun ; adequate shelter from north winds. An environment suitable for outdoor life in fine weather, and providing shelter in cold and wet seasons. Facility of access.

Such conditions exist in few places in the British Isles more admirably than at the sites which, of late years, have been selected for our large asylums. The position of the Northampton County Asylum, for instance, fulfils all these conditions admirably ; an elevation of 400 feet, the highest in the county ; distant from the town three miles of good road ; a thick wood to the north ; an uninterrupted horizon to the south and west ; a fine soil ; a good water supply ; and an estate of some 240 acres available for exercise and occupation ; and also from the relative elevation, dryness and freedom from dust, combined with a generous rainfall.

The question of site, then, for these asylum-sanatoria would offer little difficulty. The buildings themselves might be either single, as at Falkenstein, or arranged in villas, as at Nordrach and the Adirondacks. With the general adoption of the "villa" system of asylum construction the whole question of phthisis prevention would be solved, were the principle of isolation rigorously enforced.

Buildings on the Falkenstein plan are, as a rule, two stories in height, and constructed so that a long frontage to the south is secured. Wings are thrown out from each end of the main building at an obtuse angle, so that exposure to the south is combined with protection from east and west winds. Such a building is well adapted to asylum necessities, especially if broken into pavilions. Separation of the sexes can be conveniently effected by the usual central administrative block running northwards to the mortuaries, disinfecting furnaces, &c., in rear of the main building. In most Continental sanatoria verandahs, shaded by glass or other material, run the whole

length of the south side, and paved walks are provided. Sanatorium managers require an allowance of not less than 1000 cubic feet of space per head in dormitories, which should all be well lighted from the south and freely ventilated. Recent literature on this subject is so voluminous that further reference to construction is unnecessary here.

We have now to consider such modifications as asylum physicians would demand in the plan of these sanatoria.

First, as to size; Continental sanatoria variously provide accommodation for from 20 to 200 patients. But, since such asylum-sanatoria as we are proposing would necessarily be independent administrative units in respect of kitchens, &c., economic considerations would suggest provision for not less than 200 patients and the necessary staff.

Provision for 200 patients would not at first, at any rate, be in excess of the needs of an asylum with 1000 inmates. With a greater number treatment would be less beneficial, with a less number administration would be expensive. It would probably be to the advantage of the smaller asylums to board out their phthisical patients. And it would certainly be to the financial advantage of asylums of medium size—those accommodating from 600 to 1000 patients—to provide sanatorium accommodation in excess of their own necessities.

London, Lancashire, or Yorkshire might establish in suitable localities groups of asylum sanatoria to which cases of phthisis might be drafted. Such groups, composed, let us say, of five units, each accommodating 200 patients, could be conveniently administered and would lend themselves admirably to a system of classification in the interests of the inmates.

Let us assume, then, that the best size, on the whole, for a sanatorium is such as would hold 200 patients. For such an institution the plan followed at Falkenstein—the plan of a long building facing south with short east and west wings—seems most convenient. Necessarily the equipment and organisation must closely approximate that of an asylum for ordinary mixed cases of insanity; but in an asylum sanatorium for 200 patients at least 40 or 50 would need sick room accommodation, and such dormitories should be placed on the ground floor so that beds and couches could be wheeled out to the verandahs. On the upper story of each wing well lighted and ventilated single bedrooms could be arranged for the use of

quiet patients, at right angles to a central corridor. In the main building and wings day-rooms, with annexed dining-rooms, might conveniently occupy the ground floor.

This brief sketch is not put forward as a definite plan but as an outline to be modified and filled in; and these tentative proposals would be yet more imperfect were no suggestions made for the daily life of the inmates. The aim of the medical officer should be to secure for his patients the maximum of sunlight and fresh air. It is so generally recognised that out-of-door employment is one of the most potent weapons in the hand of the alienist physician that there is little need now to insist on its value. But for persons who besides being insane are phthisical, gentle labour in the field and the garden is of far more value than simple out-of-door sauntering. The muscles are toned, the bowels and skin stimulated, and, above all, the mental currents are diverted by it. In my own experience phthisical patients have proved by no means the most incompetent gardeners and farm labourers. For the rest, every patient that could should be taken daily walks; and everyone should spend hours in open courts, gardens, and verandahs. Even the sick and infirm should be wheeled on couches or in chairs into the direct sunlight.

The most scrupulous attention should, in the interests of patients and nurses alike, be paid to the disinfection and sterilisation of clothing, bedding, knives, forks, spittoons, &c. The provision of a special laundry is, of course, imperative. No doubt the free use of chemical disinfectants is a matter of anxiety, yet sanitas can do but little harm; handkerchiefs should be destructible; and enamelled iron spittoons and utensils can be frequently sterilised by heat.

Food should be rich in fat. Bacon should be a staple article of diet; pure cocoa should supplant tea; butter and milk should be good and abundant.

Lastly, it should be remembered that at the present day the tendency is to make too little of the medical treatment of tuberculosis. But if phthisis is to be conquered not a single symptom should pass without an effort to subdue it.

It will be urged against any such scheme as this that the expense would, in the case of paupers, be prohibitive, but the initial expense of erecting these asylum sanatoria for individual or grouped asylums would be little more than the cost of

provision for the inevitable increase in the number of lunatics that in any case has to be faced.

This is our rough scheme. The principles are simple: complete separation of tuberculous from non-tuberculous patients; for the tuberculous patients the modern, approved sanatorium treatment.

APPENDIX A.

Statistical Tables.

As the annexed tables have been prepared from official returns, the form they have taken is that prescribed by the limitations of those in the various Blue Books. A few words of explanation appear therefore necessary. Tables I to V refer solely to lunatics living in institutions; they do *not* incorporate statistics of those in private houses. But while Tables II and IV refer to the pauper asylums *only*, Tables I, III, and V embody statistics of other institutions.

Table I includes statistics of all county, borough, idiot, and other asylums, registered hospitals and licensed houses in England and Wales.

Tables III and V include returns from every Scottish institution for the insane, and from the lunatic wards of poor-houses with restricted licenses.

That these tables deal with different classes of asylums is to be regretted, but is unavoidable; for the Scottish Blue Books alone give information of the causes of death in the various classes of asylums. Still the licensed houses in England and Scotland accommodate relatively so small a number that the tables are only nominally affected by their inclusion with the institutions to which this paper more particularly refers.

One word more is necessary. In Scottish and Irish asylums no tubercular disease other than "phthisis" or "consumption" appears to be recognised as a cause of death. But in the returns from English (and London) asylums the vague term "tuberculosis" appears.

The deaths assigned to this cause are relatively so very few that it has been thought fair to add them to the deaths ascribed to "phthisis" or "consumption."

TABLE I.—*Showing the Mortality from Phthisis and the Death-rate from all causes in the Asylums, Registered Hospitals, &c., of England and Wales since 1893.*

	1894.	1895.	1896.	1897.
Average Resident Population . . .	61,072	71,682	74,784	77,217
Total number of Deaths	5,926	7,182	6,783	7,298
Death-rate (per 1000 Average Resident Population)	97	99·9	90·7	94·5
Deaths assigned to Phthisis . . .	920	1,135	1,029	1,140
"Official" Phthisis Death-rate (per 1000 Average Resident Population)	14·1	15·7	13·7	14·7
Percentage of total Deaths assigned to Phthisis	15·5	15·8	15·0	15·6

The figures for 1894 do *not* include returns from registered hospitals and licensed houses.

TABLE II.—*Showing the Mortality from Phthisis and the Death-rate from all causes in the Asylums of the London County Council since 1892.*

	1893.	1894.	1895.	1896.	1897.
Average Resident Population . . .	9,015	10,192	10,591	11,309	11,764
Total number of Deaths	836	963	1,052	1,016	1,036
Death-rate (per 1000 of Average Resident Population)	92·7	94·5	99·3	89·8	88·1
Deaths assigned to Phthisis	114	97	129	97	116
"Official" Phthisis Death-rate (per 1000 Average Resident Population)	12·6	9·5	12·1	8·5	9·86
Percentage of total Deaths assigned to Phthisis	13·6	10·08	12·2	9·54	11·1

TABLE III.—*Showing the Mortality from Phthisis and the Death-rate from all causes in Scottish Institutions for the Insane since 1892.*

	1893.	1894.	1895.	1896.	1897.
Average Resident Population . . .	10,191	10,487	10,916	11,145	11,526
Total number of Deaths	867	818	939	852	955
Death-rate (per 1000 of Average Resident Population)	85·6	77·9	86·0	76·4	82·8
Deaths assigned to Phthisis	113	111	123	130	120
"Official" Phthisis Death-rate (per 1000 Average Resident Population)	11·0	10·5	11·2	11·6	10·4
Percentage of total Deaths due to Phthisis .	13·01	13·5	12·69	15·2	12·5

TABLE IV.—*Showing the Mortality from Phthisis and the Death-rate from all causes in the District Asylums of Ireland since 1892.*

	1893.	1894.	1895.	1896.	1897.
Average Resident Population . . .	12,307	12,605	13,082	13,735	14,340
Total number of Deaths	1,076	1,108	933	926	1,091
Death-rate (per 1000 of Average Resident Population)	87·5	87·9	71·3	67·4	76·0
Deaths assigned to Phthisis	306	324	257	255	343
"Official" Phthisis Death-rate (per 1000 Average Resident Population) . . .	24·8	25·7	19·6	18·5	23·9
Percentage of Deaths assigned to Phthisis .	28·4	29·2	27·5	28·5	31·4

TABLE V.—*Showing the Absolute Annual Average Mortality from Phthisis in Scottish Institutions for the Insane during five consecutive quinquennia.*

	1870–74.	1875–79.	1880–84.	1885–89.	1890–94.
Average Resident Population—					
Male	2928·8	3434·0	3999·7	4324·1	4800·0
Female	3268·7	3831·5	4359·2	4616·0	5202·7
Total number of Deaths—					
Male	264·6	302·6	330·6	351·2	445·8
Female.	270·4	278·2	329·2	340·4	405·6
Death-rate per 1000 (Average Resident Population)—					
Male	90·3	88·09	83·2	81·2	92·8
Female.	82·7	72·6	75·5	73·7	77·9
Deaths assigned to Phthisis—					
Male	33·8	38·2	37·2	40·6	52·6
Female.	52·0	45·2	52·4	48·6	57·8
"Official" Death-rate from Phthisis—					
Male	11·2	11·1	9·3	9·3	10·9
Female.	15·9	11·9	12·0	10·39	11·1
Percentage of Deaths assigned to Phthisis—					
Male	12·8	12·6	11·2	11·6	11·8
Female.	19·2	16·2	15·9	14·3	14·3

TABLE VI.—*Showing for different age periods the Phthisis Mortality in England and Wales during various terms of years since 1850 per 1,000,000 living* (*Dr. Tatham*).

Period.	All ages.	-5	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-
1851-60	2679	1305	572	1025	2961	4181	4317	4091	3466	2840	1983	808
1861-70	2475	968	454	825	2651	3928	4243	4026	3340	2656	1603	539
1871-80	2116	767	358	664	2036	3117	3619	3745	3132	2449	1476	492
1881-85	1830	569	312	560	1695	2535	3154	3312	2849	2197	1362	490
1886-90	1635	502	271	488	1420	2144	2691	2985	2656	2150	1363	555
1891-95	1463	444	228	410	1253	1875	2342	2771	2440	1941	1147	440

APPENDIX B.

LIST OF WORKS, &c., CONSULTED OR REFERRED TO.

(*a*) *Statistical Reports, &c.*

Reports of the Commissioners in Lunacy (England), 1870-98; Scotland, 1872, 1888, 1894-98.
Reports of the Inspectors of Lunatics (Ireland), 1884-98.
Report of the Royal Commission on the Relation of Tuberculosis to Food Supply—Parts I and II. 1898.
Reports of the Asylums Committee of the London County Council, 1894-98.
Reports of the Hereford Asylum, 1874-75.
Reports of the Northampton County Asylum, 1880-98.
American Journal of Insanity, 1894, pp. 182-195.
Medical News of Philadelphia, 1895, pp. 357-359.
Journal of Mental Science, January, 1873, p. 554 ('Note on Reports of Scottish Commissioners').
Ibid., April, 1895 ('Insanity and Phthisis in Ireland').

CHALMERS, Dr. A. K.—*Practitioner*, June, 1898.
CLOUSTON, Dr.—*Journal of Mental Science*, 1863, and April, 1874, p. 16 *et seq.*; *Dict. of Psych. Med.* (article on 'Phthisis').
FARQUHARSON, Dr. - *Journal of Mental Science*, July, 1898.
RANSOME, Dr. A.—*Researches in Tuberculosis*, 1897.

(*b*) *Ætiology and Treatment of Phthisis.*

CRICHTON BROWNE, Sir J.—*Brain*, 1892.
BREHMER.—*Die Therapie der Chronischen Lungenschronidsucht.*

Brit. Med. Journ.—'Reports on Sanatorium Treatment,' 1898.
BROADBENT, Sir WM.—*Lancet*, October 29th, 1898 (speech at Marlborough House, December, 1898).
BURTON-FANNING, Dr.—'Sanatorium Treatment in England,' *Lancet*, March, 1898; *Practitioner*, June, 1898.
MACCORMAC, W.—*Consumption and the Air Re-breathed.*'
MACKENZIE, Dr. H.—'Treatment of Phthisis,' *Practitioner*, June, 1898.
PETIT, LÉON.—*Le Phthisique et son Traitement Hygiénique.*
POLLOCK, Dr.—'The Hospital Treatment of Consumption,' *Practitioner*, June, 1898.
RANSOME, Dr. A.—'Sanatorium Treatment,' *Brit. Med. Journ.*, July, 1898.
WALTERS, Dr. R.—'Sanatoria for Consumptives,' *Practitioner*, June, 1898.
WEBER, Dr. HERMANN.—*Practitioner*, June, 1898.
WILLIAMS, Dr. T.—'Sanatorium Treatment of Tuberculosis,' *Brit. Med. Journ.*, July, 1898; *Pulmonary Consumption.*
CROOKSHANK, F. GRAHAM.—'Treatment of Phthisis,' *Clin. Journ.*, December, 1897.

Relation of Syphilis to Insanity. A Discussion opened by F. W. MOTT, M.D., F.R.S., Pathologist to the Asylums of the London County Council.

Dr. MOTT.—Before I was intimately associated with lunacy I was astonished to find in my hospital experience that nervous diseases were so frequently due to syphilis. I therefore adopted the treatment of giving mercury and iodide in all doubtful cases. In regard to general paralysis, I agree at first with those authorities which believe that syphilis had little to do with it; but careful examination of the patients and post-mortem investigations convinced me that syphilis plays an important *rôle* in this disease.

In studying the relation of syphilis to mental diseases one has to consider the various ways in which the syphilitic poison may act, also to arrive at some conclusion as to what proportion of the male adult population is infected. This is, however, a difficult matter in England, but not so in those countries where everybody who suffers with this disease comes into one general State hospital; for example, in Scandinavian countries a record of all cases is kept, and when a patient comes again

later on for some nervous disease his previous history can be referred to. In London, however, we have special hospitals for everything, and many of my patients have come from the Eye Hospital, owing to affection of the eyes being the first noticeable symptom of brain syphilis. They may, perhaps, have attended the Lock Hospital, but there is no correlation of statistics.

Out of 360 adult male out-patients I have found that 20 to 25 per cent. gave a history or had signs of syphilis on the body. This proportion is possibly larger than it would have been had not a good many nervous cases, most of which were due to syphilis, been sent to me.

I shall endeavour to point out to you that syphilis is one of the most important extrinsic factors in the production of organic brain disease and associated insanity, and that from a pathological standpoint it may operate in two ways.

Firstly, the poison may produce a specific inflammatory process affecting the membranes and blood-vessels of the central nervous system, either of which may be affected separately or together. The process may be local or general. The inflammatory process may produce direct irritation or destruction of the nervous elements ; the blood-vessels may be partially or completely occluded, and the effects on function will depend on the extent of the process. The inflammatory process may also give rise to neoplastic growths, which may undergo regressive metamorphosis in the older parts (gummata) ; but all the processes are pathologically identical. I have studied this form of brain syphilis both in my hospital and asylum practice, and I have collected 60 cases with 23 post-mortem examinations, and these cases show some important features. First of all with regard to the onset of brain symptoms after infection ; I have found I could get a history of the time of infection in 40 cases, and out of these 40, 20 occurred in the first four years. It was and is usually taught in this country that brain syphilis is a late tertiary symptom, but careful statistics in Germany and Scandinavia have shown that this is erroneous. Another fact I have noticed with regard to many of these early cases was that they were very malignant and were usually associated with mental symptoms, and post mortem they exhibited multiple lesions in the brain. They often progressed to a fatal issue in spite of treatment. Many of the

cases were closely allied in their symptoms to general paralysis, with which in the asylums they were usually confounded; although there were certain symptoms in the cases which should on closer examination have led to a different diagnosis having been made. These cases might be termed *pseudo-general paralysis*, because there is progressive dementia and progressive paresis; but the disease differs entirely from general paralysis, pathologically considered.

I have seen almost every form of insanity diagnosed, and post mortem brain syphilis has revealed the real nature of the disease. For example, I remember the case of a woman in one of the asylums who was said to be suffering from melancholia and Addison's disease; I saw her and noticed a diffuse pigmentation of the skin, but not in the situations where pigment naturally exists. She had a scar on the inside of the knee and evidence of old iritis, which I took to be obvious syphilitic residua. She suffered with delusions of persecution and headache. There was no paralysis until shortly before death, when ptosis was noted. There was no increase of temperature, but I have observed that apyrexia is usual in syphilitic meningitis, which I diagnosed, recommending anti-syphilitic treatment. It was, however, only persisted in for a few days. The patient died, and at the autopsy basic syphilitic meningitis and arteritis was found.

Hospital cases of brain syphilis are, as a rule, easy to diagnose because they present characteristic paralytic phenomena, or they will complain of severe headache and give a history of infection; but cases presenting only psychical symptoms, and due probably to circulatory disturbances or to meningitis without complete blocking of vessels to cause softening in parts of the brain which will give rise to coarse paralytic phenomena or loss of function, are extremely difficult to diagnose.

Disturbances of consciousness, recurrent attacks of drowsiness, stupor, and coma, should always make one suspect basic syphilitic meningitis. All stages between slight impairment of intelligence and gross dementia may be met with, and the variability of the dementia is especially characteristic of the disease. Sometimes delirium with acute maniacal excitement may be the first indication of mental symptoms. A frequent condition I found in these cases was mental depression with

delusions of persecution and attempt at suicide, alternating with a condition of mental excitement in some cases. Comatose and epileptiform attacks simulating general paralysis may occur. No harm can be done by treating doubtful cases by anti-syphilitic remedies, and very often quite satisfactory results obtain.

I have recently seen a man in Hanwell who suffered with multiple brain syphilis eighteen months after infection, aged twenty-three. He was paralysed and demented, but has greatly improved under treatment.

The most difficult cases are those in which there is universal arteritis without actual occlusion causing softening. In such cases there is progressive paresis and dementia; they simulate very much the clinical phenomena presented by general arterio-sclerosis cerebri. In fact, careful microscopical examination and clinical investigation of some of those cases of arterio-sclerosis cerebri occurring about fifty years of age are very likely syphilitic in origin, for examination of the arteries in some of these cases has shown me an atheroma of the arteries of the circle of Willis, while sections of the perforating lenticulo-striate arteries, which penetrate the internal capsule, exhibited an endarteritis indistinguishable from syphilitic. Moreover many of these cases had unmistakable signs of syphilis on the body, and I have come to believe that Heubner's dictum—that syphilitic endarteritis never undergoes fatty degeneration—although generally true, is too restrictive.

There are a number of cases with syphilitic history which run a long course, and yet present symptoms very like general paralysis. When examined microscopically one finds Meynert's columns are perfectly shown, although there is marked atrophy of the brain. The tangential fibres may be present in abundance on the surface of the brain, and yet the patient is the subject of progressive paresis and dementia, and often suffers with epileptiform seizures. The membranes are thickened, also the walls of the small vessels, but there is no affection of the large vessels. Such might be termed chronic meningo-encephalitis. In one of the most characteristic of these cases there was a history of lead poisoning; the man had worked for a long time with lead, and I have no doubt that this and the syphilis together had produced this condition.

I have hitherto referred briefly to the effects of syphilis on

the brain in producing coarse lesions—that is generally acknowledged, and will not afford such scope for discussion by this Society as the relation of syphilis to those affections which are termed parasyphilitic, namely, general paralysis, and tabes.

[Dr. Mott here handed round a number of photo-micrographs illustrating the pathology of brain syphilis in its multiple phases.]

My idea of the pathology of these parasyphilitic affections is that syphilis, whether acquired or inherited, may lower the specific vital energy of the nerve-cells, so that systems of neurons may, under the influence of *stress* in one form or another, die prematurely. I agree with Binswanger, Clouston, Mickle, and others that general paralysis is primarily a degeneration of the neuron with secondary changes in the membranes and vessels in consequence of irritation from the products of degeneration. There are certain facts which support this view pathologically; certain regions of the brain are affected more than others—for example, the central and frontal convolutions generally show marked pia-arachnoid thickening as compared with the temporal and occipital lobes. This has been associated by Flechsig with the distribution of the internal carotid artery. I consider that the pia-arachnoid thickening corresponds more closely with the distribution of the veins opening into the longitudinal sinus; because the current in these veins is opposed to gravity, and from their oblique opening into the sinus and contrarily to the current in it the area which is drained by them would be more likely to suffer from venous stasis than the areas drained by the lateral sinuses and the torcula. I do not, however, deny that the area supplied by the carotid would be less likely to be filled with arterial blood if the arterial pressure were low, but it is not so as a rule. I have found that when nervous tissue breaks up various products are formed which escape into the cerebro-spinal fluid, *cholin* among others, and nucleo-proteid. In conjunction with Prof. Halliburton I have shown that the former is a toxic body, which, injected into the vein of an animal, produces a marked fall in the blood-pressure by acting on the peripheral neuro-muscular mechanism of the splanchnic area especially, but also it acts upon the heart: whether the escape of this product plays any part in some of the complications of the disease I am not yet prepared to say. It is,

however, of importance as showing the possibility of auto-intoxication.

The existence, however, of various abnormal products in the cerebro-spinal fluid may explain the proliferation of the neuroglia elements; the nucleo-proteid constituent would suffice to explain venous stasis in areas undergoing degeneration, for it is known that this substance when injected into the circulation even in small quantities causes coagulation.

The dictum of Virchow, "that a cell nourishes itself and is not nourished," is to my mind the fundamental principle of the pathology of general paralysis. The complex nerve-cell termed the neuron may undergo degeneration for two reasons: (1) because the nutriment brought to it is inadequate—as, for example, in those forms of organic brain disease which arise from occlusion of arteries; there is obvious cause why the nervous units should cease to perform their functions; (2) there is a reason why, when you remove this cause, the nerve-cells will be restored in great measure to their original functions. But if the life of the nerve-cell is coming to a close, it is of no use to bring fluid to nourish it, for it cannot assimilate it; it therefore dies prematurely. These degenerations are usually systemic: in the case of tabes the first afferent system of neurons is affected; in general paralysis it is usually the highest and latest developed association systems of neurons which suffer first; but occasionally in the tabetic form it may begin in the first afferent system. There is one striking feature in the pathology of general paralysis which I have never failed to find, and that is that those delicate fibres which serve to co-ordinate afferent and efferent tracts and association systems of the brain—I mean the tangential system of fibres—are always wasted first. I have examined the cortex in fifty cases, and have never failed to find disappearance, in some partial, in some complete. This was discovered by Tuczek; and although not absolutely pathognomonic of general paralysis, for it does occur in alcoholic dementia, yet I should hesitate to call a case general paralysis in which I found these fibres intact. The syphilitic toxin is one of many factors in the production of the degenerative process: I do not believe it is absolutely essential; at any rate, the statement "no syphilis, no general paralysis," is not proved. But I do say, and everything tends to prove it, that syphilis is the most important factor by reason of its prevalence, its persistence,

and its potency in producing devitalising effects upon structures which are incapable of repair, and incapable of regeneration. The nerve-cells are perpetual elements, they exist when the body is developed at birth ; there is no increase in number, there is merely an increase in complexity of structure. The neuron consists of a little mass of protoplasm which sends out one process—the neuraxon, and numbers of other processes termed dendrons, until you have a structure very like a tree. I conceive that the syphilitic poison by its devitalising effects slowly produces a regressive metamorphosis, commencing at the terminal twigs and proceeding back to the trophic centre, the cell body. If this be a slow process, involving only a small portion of the nervous system as in tabes, auto-intoxication is less likely to occur from the breaking down of nervous matter. In rapid cases of general paralysis, where a large mass of nervous matter may be disintegrating, a vicious circle is liable to be established by the accumulation of products of degeneration in the perivascular lymphatics, causing vascular stasis and inflammation, which may be the exciting cause of fits and acute destruction of nervous matter. This seems highly probable, seeing that in cases where there have been prolonged epileptiform convulsions I have invariably found upon examination of the spinal cord by the Marchi method, evidence of extensive degeneration in the crossed-pyramidal fibres, proving therefore recent death of the psycho-motor neurons of the Rolandic area. The fits were the evidence of the irritative discharge of the dying structures. Still another factor is necessary besides the toxic influence to produce this premature decay, and probably the ætiology of the disease is best summed up in the dictum of Kraft-Ebbing, "Civilisation and syphilisation together are the main causes of general paralysis." In all diseases the great difficulty of studying the ætiology and pathology of the morbid process is that you are not dealing with a single factor ; you cannot eliminate all factors but one, a principle necessary for the true differential method of inductive logic ; there is therefore always a fallacy. Still, when we come to consider the history of our knowledge of this subject, we find that it was in those countries where the opportunities for ascertaining the relation of syphilis to general paralysis are most complete—for example, in Scandinavia—that the causal relation of the two was first pointed out by Kjelburg, Esmarck and Iessen.

Fournier first said it had nothing to do with syphilis, and now he is a firm believer that syphilis is the most powerful cause in the production of general paralysis. Then we have the experience of Dr. Savage in this country, who has long advocated this from his own observations, and also Dr. Ferrier, and I believe Dr. Mickle too acknowledges the intimate association that syphilis has in general paralysis, but they would not go so far as to say "no syphilis, no general paralysis," although I think Dr. Ferrier almost said as much at Edinburgh last year. We have brought before us by those who do not advocate this doctrine that in Mohammedan countries and in Japan there is very little general paralysis,—that is to say, that in Japan a short time ago there were only two per cent. of general paralytics in the asylum; but you must remember that Japan has only been civilised about twenty-five years, although how long it has been syphilised I do not know. I have had several patients who have come back from Japan with very bad syphilis. When talking to a man who had been out in Japan for some time I was told that there is State prostitution, but he did not consider that syphilis was so prevalent as people often thought. I should think London has as much syphilis as any city in Japan. Another fact is that they live a different life dietetically and socially from that which we do. Again, with regard to Mohammedan countries, syphilis is extremely prevalent; but when the Arab gets it he simply says "Kismet," and does not worry about it. He is quite satisfied, lives a very frugal life, and there is not the same *stress* as in this country. Dr. Peterson, whom I am pleased to see here, has visited Cairo, and he did not find any general paralytics there. I wrote to Dr. Warnock, and he replied that he had twelve general paralytics out of 450; that six of the men were certainly syphilitic, three probably, and there were three women without a history. Everybody knows that priests, Quakers, and the clergy are very free from syphilis and from general paralysis. Then we know how very common it is among the lower classes of women, and how exceedingly rare it is among the upper classes and aristocracy in the female; but it is relatively common on the male side. Some time ago a paper was written by Dr. Simpson, of the West Riding Asylum, and he stated that he saw very little evidence of syphilis on the post-mortem table, and very few cases had occurred of secondary syphilis or evidence of chancres.

This he brings forward as proof against the influence of syphilis in general paralysis; but considering the promiscuous sexual life that a general paralytic often leads when the disease is coming on him, I consider that it is nothing but the fact that he has had syphilis before which would prevent him from getting it. Kraft-Ebbing was so convinced of this that he put it to the test—a proceeding which would not be warranted in England, but it is very valuable to know of. He inoculated eight general paralytics who had symptoms on the body with the virus of a hard chancre, and watched them for 180 days. Not one took it. The only inference one can draw from that was that they had previously acquired or inherited syphilis. Of course medical officers in asylums have far too much to do, and they cannot give the time to the investigation that is necessary to make accurate statistics. Still, one gentleman, Mr. Lewis, was good enough at my suggestion to go into the matter, and he spared no pains to find out whether the patients under his charge had had syphilis or not. Taking 200 admissions in 1897, he found that 70 per cent. had had venereal disease of some sort. Still the proportion of venereal disease was not nearly so great as the proportion of syphilis in the general paralytics. There were 23 of such patients, and among these 16 had had syphilis. Most of them had signs on the body, or else they had a definite history, such as scars or enlarged glands. The result of this was that he made out about 65 per cent. as having had syphilitic affection. That corresponds very nearly with my own observations, but I have not been able to make any systematic series of investigations. I have examined a large number of cases in which I have been interested because they have shown some particular phenomena, such as tabetic cases, or cases having a large number of fits, or presenting some unusual physical or psychical phenomena; and I find, generally speaking, signs of syphilis or a history of it. I find from 60 to 65 per cent. of such cases have a definite history or signs of syphilis, and when we come to examine the bodies on the post-mortem table the relative proportion of those cases which have signs of chancre or enlarged glands, or the three or four conditions combined, is enormously greater in general paralysis than any other form of insanity except syphilitic brain disease. Still, for all that I would say that the obvious syphilitic residua in the body are not nearly so marked

as in the cases of true syphilitic brain disease. I am not surprised at this, because, as Hitzig has shown, there are possibly several toxins in a syphilitic infection. There may be a toxin which acts particularly on the epiblastic structures, whereas another form may act upon the mesoblastic structures, causing syphilitic inflammatory affection of the vessels and membranes. We have an analogy in diphtheria. The mildest cases, as you know, are more often followed by diphtheritic paralysis. The patient never supposes that he had diphtheria, but when you inquire into the case you find that he had a sore throat which only lasted a day or two, and was considered as nothing. So it is in these cases of tabes and general paralysis. They have what may be called a soft sore, and I think that those mild forms are possibly due to an inherited immunity. Still those cases of mild forms of syphilis are very frequently followed by what are termed parasyphilitic affections.

Since asylum statistics are often quoted against this view, I will give you an example of their value. I went down to an asylum not long ago to see some cases of general paralysis, and I examined in the usual way. I always make it a rule to see whether there is a scar and also whether there are enlarged glands or anything on the shins. One man had a scar and enlarged glands, and pigmentation of the shins. I said to him, "Have you ever had syphilis?" He said, "Yes, I had it when I was nineteen, and attended the Lock Hospital for eighteen months." Another one had a scar and enlarged glands, but he was too demented to get a history from. I went to the case-books. In one it said, "No suspicion" of syphilis, and in the other there was no note. If these facts constitute no suspicion, I would like to ask what constitutes a proof. I think we must be, however, charitable to the medical officers, because they are overwhelmed with clerical duties, and they really have not time for a proper investigation of these cases.

Now, with regard to *the juvenile form of general paralysis*, I think this is the strongest evidence of all that syphilis is the most important cause of general paralysis. We have there no other factors coming in. We have, as nearly as we can possibly have in disease, the true differential method of experiment. We have no alcohol to deal with except in the case of the parents; we have less mental stress, worry, or excitement.

They do play a part, but I do not think it is so important as in the adult form. But when you get the statistics, twenty-two cases collected from the London area, in 80 per cent. there was absolute proof of syphilis, in 60 per cent. signs on the body, and in the other 20 per cent., although there were no signs of syphilis, it could not be excluded. Dr. Crocker has said that if you take 100 cases of skin syphilis you will not get a history in more than 80 per cent. of your cases, and it is just the same with these nervous diseases. It was less than 80 per cent. in which I could get a certain history in my sixty cases of brain syphilis. I think such a percentage as this shows, as Thiry maintains—and he has recently quoted sixty-seven cases collected, which represent all cases hitherto reported—that syphilis is a most important factor. He also lays great emphasis upon heredity, but when you come to examine heredity as I have done in these twenty-two cases, I do not think it plays nearly such an important part as in other mental diseases. In three of those cases in which there was an heredity history the father suffered with, or had died of general paralysis. I wrote to the asylums asking for particulars about them, but not one showed signs of syphilis on the body, and yet the evidence of syphilis was shown in the children they produced. There was also one case of heredo-tabes in a young girl with marked congenital syphilis. Her father died recently in Banstead Asylum of general paralysis. Dr. Shaw informed me that there was no history or signs of syphilis on the body in this man.

Dr. Mott now showed lantern slides illustrating the tables given by Hirschl, showing sixty observers' statistics concerning the relation of syphilis to general paralysis, and he remarked that he was convinced that if Hirschl had not proved his point by his admirable investigation of the ætiology of general paralysis in its relation to syphilis he had certainly shown the overwhelming *rôle* played by syphilis in the production of this disease. These statistics relate to 200 cases ; syphilis occurred with certainty in 56 per cent., probably in 25 per cent., making 81 per cent. in all.

Dr. Mott then showed a number of microphotographs illustrating points in the pathology of general paralysis which he had previously alluded to ; he also pointed out the close relationship, pathologically speaking, of locomotor ataxy and

general paralysis, affirming the pathological identity of the two diseases. In support of this conclusion he remarked that the most frequent physical sign met with in the two diseases is the Argyll-Robertson pupil. He also emphasised the fact that this pupil phenomenon is not met with in any other disease except brain syphilis, but he stated whereas external ophthalmoplegia is extremely common in basic syphilis it is much less frequently met with in general paralysis, although it is not uncommon in tabes. The converse is true with regard to the parasyphilitic affections, external ophthalmoplegia being more common. Still all these ophthalmoplegias of the third nerve point especially to the influence of the syphilitic toxin.

He showed likewise photographs of the spinal cords at various levels of eight cases of the tabetic form of general paralysis, and compared the lesions with true tabes. He pointed out, moreover, that in these cases, as in tabes, it was the exogenous system of fibres of the posterior columns which were degenerated, and that in the region where the degeneration took place, and only there, you have the pia-arachnoid thickening and overgrowth of glia tissue secondary to the atrophy of the nervous structures. He next showed a number of photographs illustrating the congenital syphilitic lesions in cases of juvenile general paralysis, and he threw on the screen a tabular synopsis illustrating the mode of onset, duration, clinical phenomena, and post-mortem results in the twenty-two cases of *juvenile* general paralysis referred to. He pointed out that all the principal symptoms characteristic of the adult form of the disease were present—progressive paresis, progressive dementia, pupil phenomena, and altered knee-jerks—generally exaggerated; characteristic alteration of verbal and written speech having been noted in nearly all the cases. The lesions post mortem—naked-eye and microscopic—were identical with those of the adult form.

I may, in conclusion, mention that the full details of the observations I have made will be published shortly in the *Archives of the Pathological Laboratory of the London County Asylums.*

Discussion

At the Annual Meeting of the Medico-Psychological Association, London, 1899.

Dr. Savage.—In the first lectures I delivered at Guy's Hospital, eighteen years ago, I said, "My experience is that general paralysis has no relationship to syphilis

whatever." Slowly my belief was changed, and now I am at one with Dr. Mott; for, when one has been able to carefully investigate, 75 to 80 per cent. bear evidence of syphilis. In many cases the syphilis is of the slightest degree, but they are not the sufferers from general paralysis. There are two very distinct sets of degeneration associated with syphilis; one in which there are gummata, and the other in which there are arterial changes. One could not help thinking, when looking at Dr. Mott's striking photographs, of hundreds of sections always showing exactly the same changes associated with syphilis and general paralysis of the insane. I agree with Dr. Mott's doctrine of the primary degeneration of the neurons in many of these cases. With regard to toxins, it must be that the same set of symptoms arise with alcoholism, with lead, and with syphilis, because there is an interference with the same parts of the brain. If it be alcohol the symptoms are sometimes temporary. If it be lead the toxin is more stable, the symptoms are more stable, and in general paralysis the progressive degeneration of these nerve-elements seems to be the most marked of all. I have always felt that meat eating, alcohol drinking, and hard working were very important factors besides syphilis; that the nervous system was ripened into rottenness by the syphilis, but it did not rot without some other cause. And again, although there is an enormous amount of syphilis in China and Japan, there is, in these countries, a very small amount of general paralysis of the insane. Therefore, although syphilis is a most important factor, yet it is not the only cause, and I am perfectly sure that I have been able to exclude it absolutely in a certain small percentage of cases. Dr. Mott spoke of the elements of dissolution, and in the decay of the nervous tissues there are very important toxic elements that may have a very serious influence upon the course of the disease. In many of these acute cases, acute onsets, acute crises in general paralysis, I think that a process of degeneration associated with syphilis has been going on some time, and that the storm, started by autotoxins, depended upon changes rapidly taking place in the nervous system. Pathologists no longer look upon chronic disease as the natural issue of acute disease, but rather as related to chronic changes from the beginning. In general paralysis and in ataxia there is an undoubted parallelism.

Dr. MICKLE.—I have always said that there is a variety of relations that syphilis bears to the causation of general paralysis, or that may fairly be assumed. For example, in certain cases there is reason to suppose that syphilis acts, at all events partly, as what the old writers used to term a predisponent. It places the organism under conditions which render it less capable of resisting the morbific effect of the syphilis in all its pathological relations. In some cases at least there is a rather more direct influence, for it already has produced some diffused organic change—a change in the blood-vessels, which bear the nutritive fluid to the neurons—which in consequence of that slight change are less well nourished and more easily break down. There are other cases in which syphilis has a more direct relationship; other causes productive of general paralysis are added to its effect. Again, syphilis gives rise to lesions which are the direct outcome of syphilis, and so produce general paralysis. What I have just stated I published many, many years ago. What I have to add now I published lately; that is, that I have gradually come to see that we must alter our opinions with regard to what we admit to be syphilitic lesions. Gummatous lesions were the so-called syphilitic lesions, and we may still continue to use that name; but over and above those there are other lesions which we must admit to be syphilitic, although they have not that apparent character. They have not that pure specific syphilitic character, for the simple reason that other conditions can give rise to precisely the same morbid change. In other cases there is a slow primary atrophy of the same parts, and we certainly find this in particular positions in the cerebro-spinal nervous system. Thus, having widened the field of syphilitic lesions, one can account for everything found—every possible variety of lesion in general paralysis, the varieties of degeneration, of atrophy, and inflammation. The inflammation-producing power of syphilis extends from gummatous meningitis to other forms of meningitis, and of myelitis and encephalitis. There are two forms which have been called diffused, embryonic meningitis and encephalitis, and others admitted with less certainty. I do not believe that syphilis is the sole cause of general paralysis. A large number of the lesions are predisposable by certain other factors—alcohol, lead, ergotism, and other forms of poison. As to the degeneration being primary in the neurons—that the nervous elements themselves

are the first affected—I published that opinion sixteen years ago in a paper read at the Liverpool meeting of the British Medical Association. The substitution of embryonic tissue for normal tissues, as a secondary result of the morbid process in general paralysis, is a matter which is discussed at full length in the second edition of my work on *General Paralysis*.

Dr. RAYNER.—I have for many years taught that in general paralysis there is very far short of the same amount of nervous heredity as in other forms of insanity. The typical case to my mind presents the appearance of a long-lived person with a numerous family. Generally he has never had a day's illness before. Then there is a history of breaking down of vessels, heart disease, kidney disease, and vascular degenerations of the middle layer. In regard to the primary degeneration of the neuron, I am inclined to join issue with Dr. Mott. Of course, one cannot discuss the whole possibilities of the many modes of development of general paralysis. But to take the toxic degeneration, as in lead and in alcohol and in influenza, the localisation of the action of the poisons is very much influenced by function. Say that we have to deal with the toxin of diphtheria: if you set the affected individual at hard work with his eyes he will develop inco-ordination of sight; induce him to talk much, he will have the throat affection; set him to walk much, his legs will become paralysed. The same is true with regard to syphilis. The people who suffer from mental disorder after influenza are the people who have been worried or over-worked, and perhaps have been sleepless. Thus a large proportion of the toxic matter in the system is carried to the active centre. The same is true, as I showed some years ago, of lead. Similarly with regard to alcohol and syphilis, and that is the reason why some individuals who have contracted syphilis develop mental disorder, and others do not. This may also account for the racial differences. In Egypt, for instance, the Mohammedans take everything quietly, and few of them develop brain trouble, whereas in England, and in large towns especially, degeneration sets in.

Dr. CONOLLY NORMAN.—I hear with particular satisfaction that general paralysis is in Dr. Mott's opinion primarily an affection of the neuron. The circulatory doctrine which formerly prevailed did not command my assent. In the Richmond Asylum there are 2000 patients, with from forty to sixty general paralytics. At present there are about forty-five. I would not venture to say that general paralysis, or any other disease, is always due to one cause only; but certainly in 80 per cent. of my cases, when I can get reliable history at all, I obtain a history of syphilis, and so often has it happened that I have discovered syphilis in patients declared free of all trace of syphilis, that I have come to regard the remaining 20 per cent. with considerable doubt. I hold that juvenile paralysis is due to syphilis. About one or two cases per annum of general paralysis come to me from general hospitals in Dublin after having been under treatment for locomotor ataxia. If the destruction of the neuron is irreparable, how are we to account for those very remarkable cases of remission in general paralysis which are not uncommon? A case of this kind, of more than usual interest, will be published by me at an early date, and I trust that Dr. Mott will offer some explanation of the clinical facts.

Dr. PETERSON.—Dr. Mott's paper has brought us a great way on the road to our destination in regard to the ætiology of general paralysis. Perhaps it marks the last milestone before we reach our destination, and it seems to me that he has shown that direct syphilitic lesions of the brain differ very much from the late lesions of paresis. In locomotor ataxia we have been able, because the patients have retained their intelligence, to obtain truer statistics as regards syphilis histories than in general paresis, so that we can say that 92 per cent. or perhaps more of locomotor ataxics are syphilitic. In general paresis we cannot rely upon the statements of the patients, so that we have not been able to go beyond 60 to 70 per cent. I should say that the position Dr. Mott has taken is unassailable, and I have nothing to discuss because I agree so heartily with everything that he has said.

Dr. PERCY SMITH.—I have found a certain history of syphilis in 34 to 35 per cent., and a strong probability of syphilis in another 16 or 17 per cent., of the general paralytics admitted to Bethlehem Hospital for the last fourteen or fifteen years. I strongly agree that syphilis plays a very important part in the production of general paralysis, but must admit that one has found cases in which there was no history of syphilis whatever, and where the progressive degenerative changes

which we know as general paralysis had supervened as the result of entirely different causes.

Dr. Robert Jones.—I am sure we are all much obliged to Dr. Mott for his most able paper. It was interesting to hear Dr. Savage's early teaching at Guy's Hospital, that syphilis had nothing to do with general paralysis. It is also interesting to know that Dr. Mott started with the idea of no syphilis, no general paralysis. The truth probably lies between these two extremes, and it is supported by the fact that both these eminent authorities have considered it necessary to modify their earliest views. One point seems to strike me, and that is, if syphilis does enter as a toxin, it is curious that with juvenile paralytics it comes at a time when stress is most felt. Dr. Mott is acquainted with one of the juvenile general paralytics at Claybury. She passed the sixth standard at the Board school, and after this stress broke down. It also occurs, as we know, at a special epoch in men's lives, when stress is most apt to be felt, pointing out that there must be a considerable amount of truth in what the old physicians used to describe as a certain periodicity or climacteric in the life of the individual, during which a toxin present would be more potent than at any other period.

Dr. Shuttleworth.—Some years ago I had occasion to observe cases of degeneration in children at the age of second dentition. In four out of six or seven there were evidences that pointed to syphilitic history. When I got to know more of the history of the parents I was assured that all those cases had inherited syphilis. It is very gratifying to have the authority of Dr. Mott that one's early opinion of the ætiology of these cases has been justified by recent observations.

Dr. Mott.—I am extremely glad to think that this discussion has led to so many able and experienced men taking part in it, and I wish to thank them all for having done so. I have learnt very much from their remarks, especially those of the senior gentlemen. I should like to correct one statement of Dr. Jones. One generally has two or three phases when one is investigating a subject. Five years ago I was asked to write an article on the pathology of nutrition by Dr. Clifford Allbutt. In that article I alluded to general paralysis as being due to stress, and assumed that it was due to that and nothing else. He wrote back and said, "What about syphilis?" so that I went there with a perfectly unbiassed opinion altogether. I came to the conclusion, as many people had, that syphilis was the only cause of general paralysis. Now I am inclined to say that it is not proved any more than it is proved in locomotor ataxy. I do not see why any poison coming into the system which produces a devitalising effect upon the tissues of the body, that, given stress, general paralysis should not result. I should like to bring forward some evidence in support of this, namely, the weights of the hemispheres of the brain. In a series of six cases of juvenile general paralysis in which I have weighed the hemispheres I have found the left hemisphere weigh, on an average, 28 grammes less than the right, and I consider this a very important fact when you take into consideration that we must use the left hemisphere much more than we use the right, because in the left are all the speech centres and the representation of the right hand. I have weighed the hemispheres in people dying at Claybury Asylum, and I have found that in 65 per cent. of the general paralytics the left weighed less than the right. If you take other forms of insanity you find that 65 per cent. weigh equally. Another very interesting fact is that a woman died, and the left hemisphere weighed 30 grammes less than the right. I made inquiries as to whether there was anything peculiar about this woman, and was informed that she habitually used her left hand. I have a number of instances I could bring before you of people who have been subject to alcohol or lead or some other toxic influence, in which stress has determined the part of the body that will be affected. As an example I may mention the case of a barmaid who came to my out-patient room. She drank pretty heavily, and used her right hand to draw the beer; that became affected, and she used her left hand; then that became affected. I am perfectly sure that it is not a single factor which operates in any disease, but I think that syphilis acts because it is the most prevalent, the most potent, and the most persistent poison affecting the human race. With regard to influenza, I had a case the other day which was attributed to it. The man had been in the army. I found he had syphilitic residua all over his body, and I should attribute it rather to the syphilis than to the influenza, but I quite believe

that influenza or any other disease affecting the body can act as a devitalising agent.

Why should the teeth be affected in juvenile paralytics? The permanent teeth were in embryo in the cavities of reserve at birth, the epithelial cells which would form the enamel were there, and it is influenced by the poison, and consequently premature decay of the teeth occurs. There is a difference between alcohol and syphilis, inasmuch as alcohol is proportional to the dose; and the same with lead, but I do not think that lead produces quite the same conditions. It affects the vessels more than the neuron itself.

Dr. Savage alluded to the toxic influences. I think this is a very important subject. One thing I claim to have proved is that the nervous tissue undergoes disintegration during convulsions, and that cholin escapes into the cerebro-spinal fluid; that people who have a large number of fits die with fatty degeneration of the heart, and this may be due to these toxic products. The arterial pressure in general paralytics is generally very high indeed. I have taken twenty cases now, and find that it has gone up to 150 and even as high as 200, as was the experience of Dr. Craig and Dr. Leonard Hill, but after they have had a number of fits you find the pressure becomes low. Whether this is due to exhaustion from the continual action of the heart under difficulties or to these poisons I do not know, but that the blood does contain poisonous products, the result of auto-intoxication, is certain.

I think that some of those cases of remission that have been related may be due to temporary vascular disturbances. Venous stasis certainly does take place, and it may go on to actual thrombosis. I have examined four cases in which there was an actual blocking of the veins with a clot which became organised, leading to continuous fits, at first on one side and then on the other. The veins were filled up and the circulation disorganised. But suppose you do not get thrombosis exactly, but just stasis, you may then have a temporary loss of function of the part which might pass off. I believe there is always a halo of functional defect of vascular origin round the degenerated part which may possibly be wiped out at any time, and will account for the temporary remission of symptoms. The cells are not all dead; they are in process of decay, and therefore if the decay is arrested, and these circulatory disturbances are temporarily relieved, the patient recovers, although he is not just the same as before. I certainly think that tabes is longer in its duration. I have known a case of tabes remain twenty-six years in the pre-ataxic stage. He then developed active symptoms, and died in a few years.

With regard to the theory of the primary degeneration of the neuron, that seems to me to be the fundamental proposition. We must exclude all those cases of vascular disease producing degeneration; and I think that some of these cases which have remissions are very probably obscure cases of brain syphilis. I look upon general paralysis as an insidious degenerative process, and not primarily due to vascular change. In a certain number of cases you will find vascular changes due to syphilitic arteritis. In tabes you do not find vascular changes accounting for the degenerative process, and I think that the sooner we recognise the fact that we have to deal with a primary degenerative process independent of vascular change, but in which vascular changes may come on secondary to the degenerative process, then we shall be nearer the pathology of general paralysis of the insane. It is a gradually decaying process going on until the fatal termination occurs, and now and then cases do occur in which remissions are observed. I saw a case some time ago among my out-patients, and was very much troubled about it. I lectured upon the case, and gave him iodide and mercury. He had syphilis, and I thought possibly it might be one of those cases due to vascular changes. He got better, and I said I must have been mistaken about the case. A student said he thought I was mistaken, as he had seen the man driving a hansom cab. I went down to Hanwell, and when looking through the case-books I saw the man's name. He was there in the last stage of general paralysis, so that his remission was quite temporary. With regard to alcohol, I think the remissions may be put down to the fact that they have given it up for the time. I think that many cases which come into the asylum with mania, providing they do not clear up in a month (knowing that they cannot get alcohol), the chances are that they are cases of general paralysis, and will probably be very acute. The most important principle with regard to the pathology of general paralysis, and its ætiology also to a less

extent, are shown in cases of juvenile general paralysis, because stress comes in less, although it does come in at puberty; but still in some of the cases I have shown there was no stress, and it was due to the syphilitic poison solely coming into the body.

Dr. Urquhart has kindly furnished me with some valuable and reliable statistics relating to the subject of the causal connection of syphilis and insanity in patients belonging to the middle classes of society, which he has kindly permitted me to append.

Concerning Cases of General Paralysis admitted into Murray's Royal Asylum, Perth, from 1880 *till* 1898 *inclusive.*—The total number of persons admitted was 266 males, 244 females—total 510. Of these, 27 males and no females were general paralytics.

Of these 27, there were 13 undoubtedly syphilitic, 8 probably syphilitic, 4 doubtfully syphilitic, and 2 probably not syphilitic.

Of the 8 probably syphilitic, 1 was temporarily blind in one eye, 1 was temporarily paralysed on one side of the face, 1 had strabismus of one eye, 2 had soft chancre, 1 had urinary stricture and scar in the groin, 1 was suspected to be syphilitic by his famiiy, 1 was a marine engineer of bad character.

Of the 6 doubtfully or not syphilitic, all had endured great mental stress; 1 was attributed to hereditary insanity and worry, 1 to hereditary insanity and alcoholism, 1 to alcoholism and gout, 3 to worry only.

The incidence of the causes may be classed as follows:

I. Insane heredity, 8; neurotic heredity, 2; parental alcoholism at the time of conception, 3; parental paralysis, 3; no hereditary tendencies admitted, 10.

II. Personal history—of worry, 15; alcoholism, 10; fall on head after alcoholism, 1; sunstroke after alcoholism, 1; sexual excess, 2; gout, 2. Two cases recovered and remain well.

Concerning syphilitic cases during the same period other than general paralytics, 14 males, 1 female—total 15. The female case soon recovered from alcoholic mania. Of the 14 males, 1 is degraded to the rank of a common labourer; 2 terminated in dementia (1 died of diabetes); 1 died of apoplexy in acute recent mania; 1 remains in a state of chronic mania; 5 remain in a state of delusional insanity; 4 continued melancholic (1 committed suicide). Two were discharged "recovered," but 1 relapsed and 1 disappeared. All remain in asylums except those 2 and those who died. The whole 14 were intractable as regards recovery, the prevailing mental state being that of limited and fixed delusions. The element of mental stress as causative was singularly absent. One male, an imbecile, a case of hereditary syphilis, may be mentioned in addition to those above detailed.

Anæsthesia in the Insane. By W. H. B. Stoddart, M.D., M.R.C.P., Assistant Medical Officer at Bethlem Royal Hospital.

The subject of the present paper has occupied my attention for more than two and a half years, and during the whole of that time I have felt deeply indebted to my colleagues both at Bethlem Royal Hospital and at the Lancashire County Asylum at Prestwich for the generous way in which they have afforded me every opportunity of studying the subject. Some of these gentlemen have not only permitted me to examine their cases,

but—knowing my interest in the subject—have, at inconvenience to themselves, drawn my attention to cases which would otherwise have escaped notice, and have further assisted and encouraged me by confirming my own observations. I therefore take this opportunity of most heartily thanking all these gentlemen for their valuable help and kindness.

I have entitled my paper "Anæsthesia in the Insane." As a matter of fact that title is not strictly accurate. It should rather be "Analgesia in the Insane." Of course, every alienist is familiar with the fact that many insane patients show no response to a pin-prick. The main object of this research has been to determine the distribution of this analgesia on the surface of the body. Two forms of stimulus were usually employed, viz. the prick of a pin and the pinch of a strong spring tie-clip.

In most of the cases there was very considerable mental reduction, and that is why a *painful* sensory stimulus was usually employed—these patients not having sufficient intelligence to give reliable information about a simple *tactile* stimulus.

In a few patients, however, it was possible to compare the loss of sensation to pain with the loss of sensation to touch. These patients had sufficient intelligence to give reliable answers as to whether they were able to feel a simple *tactile* stimulus or not. In these cases anæsthesia was invariably more extensive than analgesia,—that is to say, that beyond the area of complete insensibility there was a narrow zone in which a pin-prick or sharp pinch was recognised as a tactile stimulus. I mention this now lest I should omit to refer to the matter later on, and also in order to justify my use of the word "anæsthesia."

It is not the purpose of this paper to deal with anæsthesia which is due to coarse lesions of the nervous system. This is, of course, common enough in institutions for the insane; but it is much more easily studied in the comparatively sane patients met with in neurological practice. It would therefore be a useless task to attempt a research on such losses of sensation in the obviously insane.

Although it is not the main subject of this paper, I wish to take this opportunity of communicating the observation that "comparative hemianæsthesia" is a much more frequent condi-

tion in the insane than is usually supposed. Let me here explain what I mean by "comparative hemianæsthesia."

If a patient is quite unable to feel a tactile stimulus on the right or left half of the body—the anæsthetic half being marked off by the middle line of the head, neck, and trunk,—that condition is, of course, called "hemianæsthesia." If the patient can feel on both sides of the body, but can feel better on one half than on the other, that is what is meant by "comparative hemianæsthesia." The way to test this condition is to touch the patient with an equal amount of pressure on two symmetrical spots of skin, and to ask him on which side he believes you to be touching him the more heavily. If he states that there is a material difference on the two sides wherever you may test him, he has comparative hemianæsthesia. In some cases the patient can appreciate a tactile stimulus on either side independently; but if touched on two symmetrical spots of skin he is only able to appreciate the tactile stimulus upon one side. The hemianæsthetic side is nearly always the left in a right-handed individual, and the right in a left-handed individual.

I am not prepared to make any definite statement as to the other symptoms associated with comparative hemianæsthesia in the insane—I have not yet accumulated a sufficiently large number of cases to draw satisfactory conclusions from them. My present collection of cases, however, would appear to show that the symptom is especially associated with disturbance of the generative organs. Masturbators, climacteric cases, and women with uterine or ovarian disease are apt to show this symptom. These are the cases which are also especially apt to have hallucinations of smell; but none of my cases of comparative hemianæsthesia have shown this symptom.

I now mention severe cases of stupor. Here the patient shows no sign whatever of perception of painful stimuli. And this is the case with both the anergic and delusional forms of stupor. Further, it matters not whether the stupor occur in the course of a typical hereditary insanity, delusional insanity, epilepsy, or general paralysis. I have had examples in all these insanities of this apparent anæsthesia during stupor. If the stupor be only sufficiently severe, the patient takes no notice of pricks with a pin, pinches with a tie-clip, or of the stimulus of the electrical wire brush. When, however, these patients recovered, or when their stupor gave place to some other event

in their insanity, they were without exception able to convince me that every stimulus caused pain. They would say that they felt the pain quite acutely, but that they were unable to speak or to move in any way in order to signify that they felt it. And I am quite satisfied that there was not even any limited region on the surface of the body where they were unable to feel. In two cases, one male (case of anergic stupor) and one female (case of delusional stupor), I explained to the patients that I wished them to remember which parts of their body were analgesic, and to tell me on their recovery. I went carefully over the whole surface of the body with a pin, and impressed upon them during the whole of the examination that I wished them to remember on which parts of their body they were analgesic, and to tell me the result on their recovery. In order that I should not tire their memories I spread each examination over several days, taking the body piecemeal, and during the remainder of their illness I used to keep reminding them to remember their anæsthetic areas. In both cases they told me that they could feel every stimulus all over the body. In the case of the female this was five months after the examination, and so vivid was her remembrance of it that she had developed and (for all I know) still has ideas of persecution by me.

I now come to a variety of anæsthesia which, for some reason which I have been unable to discover, appears to have hitherto entirely escaped observation; and I cannot resist the belief that it will some day be of some importance in helping us to understand the physiology and pathology of the nervous system. For reasons which I shall discuss later on, I am of opinion that the explanation of this anæsthesia must stand over until we possess more physiological data to work upon. It will perhaps be most clearly described by first indicating its maximum distribution, and then showing less and less extensive distributions until we arrive at the minimum.

In the case presenting the most extensive anæsthesia of this variety, the patient (R. P—, Fig. 1) was unable to feel except in the following areas:

(*a*) An area about 1 inch by $\frac{3}{4}$ inch over each supra-orbital ridge.

(*b*) An area about $2\frac{1}{2}$ inches by 2 inches above the middle of each Poupart's ligament.

(*c*) Two narrow strips over the dorsal and cervical regions of the spine.

This was a case of stupor with catalepsy occurring in a Polish Jewess who had suffered from hysteria for about sixteen years, and had received treatment at nearly all the leading neurological schools of Europe. It was a complicated case; she had loss of smell and of taste, and her visual fields had been contracted for years.

I only mention this patient because her anæsthesia, while very extensive, conformed more or less to the type now under consideration. The case may or may not be of value from our present standpoint; we must not forget that she had been hypnotised many times, and that probably every neurologist under whose care she fell had attempted to arrest her hysterical fits by pressure on the supra-orbital nerves and upon the ovarian regions. Such cases as these are, of course, extremely rare.

The next stage, however, is sufficiently common for me to have discovered three examples among about 1000 cases of insanity, whose sensation was carefully examined. But it is quite possible that I may have lost one or two examples, because this anæsthesia is at times of quite short duration. I regret that I have several times come across an example of this variety of anæsthesia in its less extensive distributions, have delayed charting it for a few days, and at the end of that time have found it gone. Of these cases I consequently have only a record in writing.

In the stage now under consideration (A. E—, Figs. 2 and 3) sensation is retained in the feet, in an irregular kind of bathing-drawers area, in small more or less symmetrical spots about the nose, and perhaps a small strip over the dorsal region of the spine.

When the anæsthesia is still less extensive the above areas are larger (M. D—, Fig. 4). To speak figuratively, the sandals and bathing drawers are replaced by socks and knickerbockers, and there is a mask-like area across the face where sensation is retained. The spot in the middle of the back is larger, and there may be small areas of sensibility in the palms of the hands.

If the case improves gradually it is possible to observe the upper limit of the knickerbockers rising and the lower limit of the mask descending until the two meet. The condition is

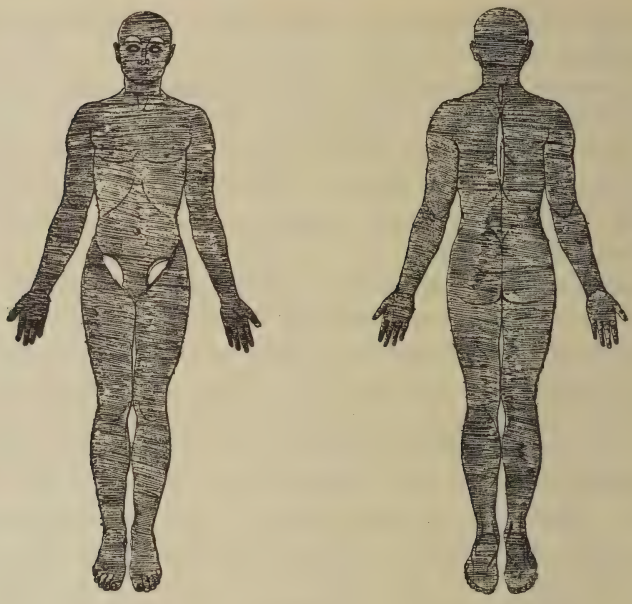


FIG. 1.

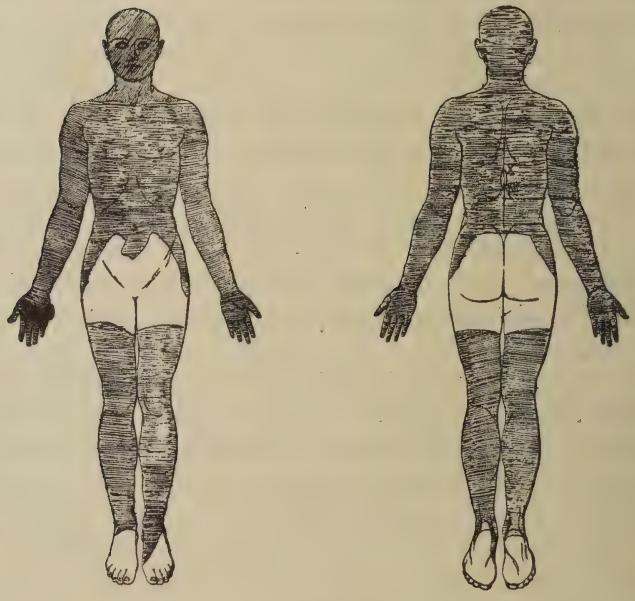


FIG. 2.

To illustrate Dr. STODDART's Paper.

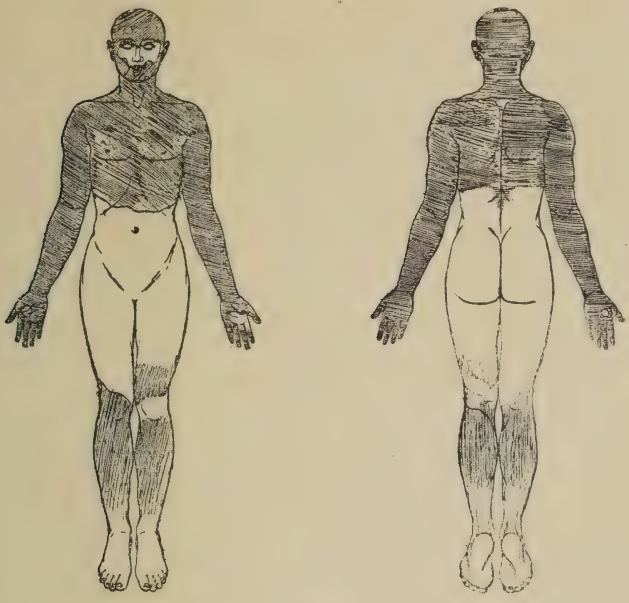


FIG. 3.

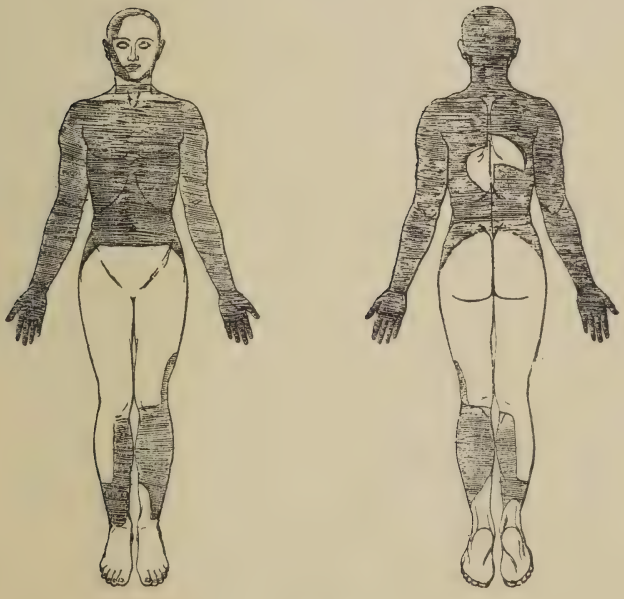


FIG. 4.

To illustrate Dr. STODDART'S Paper.

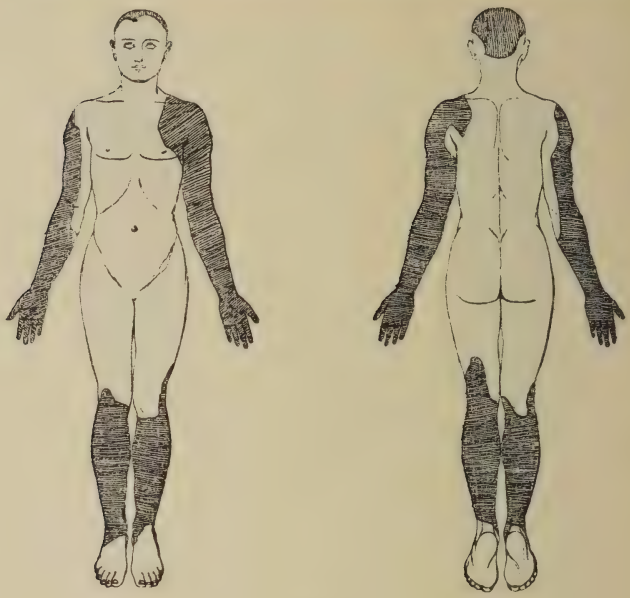


FIG., 5.

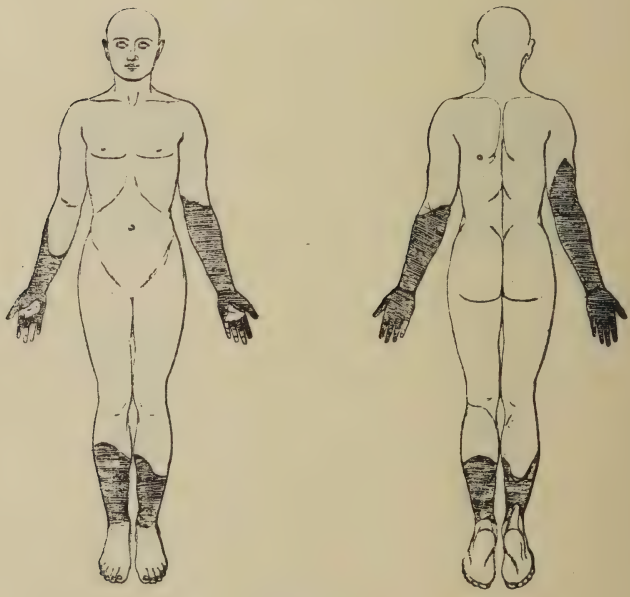


FIG. 6.

To illustrate Dr. STODDART's Paper.

DESCRIPTION OF FIGURES.

FIG. 1.—R. P—, stupor with catalepsy occurring in a case of hysteria.

FIG. 2.—A. E— (July 10th, 1897), melancholia with much loss of memory. The case in many ways resembled alcoholic dementia (so called). The patient, though non-alcoholic herself, was the offspring of alcoholic parents.

FIG. 3.—A. E—, recovering (August 8th, 1897).

FIG. 4.—M. D—, post-maniacal stupor.

FIG. 5.—M. B—, secondary dementia.

FIG. 6.—P. N—, post-maniacal stupor.

then one of anæsthesia of the back of the scalp, of the arms, forearms, and hands (the palms perhaps being sensitive), and a band of anæsthesia six to eight inches wide round the legs.

In still less extensive distribution (P. N—, Fig. 6) there is merely a sort of glove of anæsthesia up to the elbow or stopping short of this, associated with bands of anæsthesia round the legs.

And lastly, in its smallest discoverable extent there is merely anæsthesia of the backs of the fingers.

Generally, but not always, the anæsthesia is rather more extensive on the right side than on the left.

In a few cases it is possible to determine that loss of the sense of position of the hands co-exists with their anæsthesia. The patient may be unable to pick up a pin. One patient when tested in this way would try and fail to pick up the pin, and then in a characteristically insane way would repudiate her symptom and say, "I *can* pick up the pin, why *don't* I do so?" She is still under observation, and now refuses to attempt to pick up a pin. On being told that the reason of her refusal is that she *cannot* pick up a pin, she replies, "Yes, I can, but I don't want to."

In what mental diseases does this anæsthesia occur? It occurs most commonly in advanced secondary dementia—in those patients who are incapable of clothing and feeding themselves or of looking after themselves in any way, who are wet and dirty, who either do not talk at all or who only babble incoherently to themselves. These show anæsthesia varying in extent from merely a few spots on the backs of the fingers up to the gloves of anæsthesia reaching to the shoulders and associated with bands of anæsthesia round the legs.

In these cases of dementia the extent of the anæsthesia not only varies from day to day, but at times it is absent altogether, even from a patient who may the previous day have exhibited a moderately extensive distribution. The symptom, however, is not to be observed in the dementia of general paralysis.

The next most common cases are those of post-maniacal stupor. These, again, may exhibit anæsthesia of the same type and extent which occurs in the dements, but it may be more extensive. In one case at Prestwich of post-maniacal stupor the anæsthesia was one of the most extensive examples met with.

Lastly, two examples of extensive anæsthesia of this type occurred in cases of melancholia. In one case the patient stated one morning that she felt that something had gone very wrong with her. On examination extensive anæsthesia was found. It cleared away entirely in three days. The other case is one still under observation. Although I have not known the patient during the whole of her illness there is little doubt that she has been anæsthetic for three years. In her original certificates there is the statement that she "attempted to put her hand into the candle flame, and stated that she could not be burnt." Again, in the first note on her admission there is the statement that she says "it does not hurt her to cut or burn herself as it does other people, and that she only does it to show that it doesn't hurt her." This case was a somewhat peculiar one. She had been melancholic throughout, but her most marked mental symptom was loss of memory. At one time she could not even remember her own name.

Examples have also been met with in stuporose alcoholic cases and choreic insanity.

I do not yet feel justified in committing myself to any statement regarding the symptoms associated with this variety of anæsthesia. Mentally there is often but not always great loss of memory; physically there is, I believe, usually diminution of the visual fields.

I deeply regret that I can at present give no very certain explanation of these phenomena, but I have attempted to study them in various ways.

I presume that all present will agree that they are due to functional and not organic disturbance, especially in view of the symmetry and of the variability of the anæsthesia.

The two most extensive examples were in cases of melancholia. In previous papers (*Journal of Mental Science*, 1898) I gave reason for the belief that melancholia was due to an auto-intoxication of the neuron—that it was due to a retention of effete products of metabolism within the cell bodies, and no reason has been adduced why this opinion should be changed. This being so, the arguments then adduced may be used in the explanation of the anæsthesia of melancholia, however unusual it may be. The large sensory cells would, according to those principles, suffer more than the small sensory cells, and my

conclusion, therefore, is that the cells representing the bathing-drawers area and the feet are the smallest which occur among the cortical sensory cells.

It is to be regretted that this conclusion is not at present capable of confirmation or denial, because we know nothing of the cortical representation of sensation.

Meynert concluded that it was to be localised in the temporo-sphenoidal lobe ; Ferrier concluded that it was to be localised in the hippocampus ; Horsley and Schäfer concluded that it was to be localised in the gyrus fornicatus, and none of these gentlemen's experiments and conclusions have been satisfactorily contradicted, so far as I am aware. Dr. Ferrier is now inclined to join hands with Horsley and Schäfer.

Flechsig concluded from his earlier experiments that sensation was localised in the parietal cortex, and I believe I am expressing the opinion of most English neurologists when I say that clinical experience leads us to agree with this conclusion. His most recent observations are in accordance with the view of Horsley and Schäfer. Dr. Mott has some experiments in support of the localisation of sensation in the Rolandic or parietal regions.

In view of such conflicting evidence we are at present quite unable to say where sensation is localised in the cortex ; still less are we able to examine the sensory cells and compare the size of them according to the parts of the surface which they represent.

There are some striking points about this variety of anæsthesia. Perhaps the most striking of these is the fact that the parts which are omitted (bathing-drawers area and feet) are just those parts whose sensation (according to Head, Thorburn, Starr, and others) is first represented in the lowest spinal root ganglia,—the ganglia whose nerve-cells with their processes are the longest cells in the body. The cells of the ganglion on the first sacral posterior root, for instance, have one process reaching from the foot to the ganglion and another reaching from the ganglion to the medulla oblongata. These facts are striking, but it is difficult to perceive their significance.

There is a totally different mode of regarding this anæsthesia. We have been studying the appreciation by patients of sensory stimuli. We may take it as an axiom that all sensations are modes of behaviour of a mind. I use the term " sensation " in

its usually accepted sense as synonymous with the term "perception of sensation." The word "sensation" connotes the existence of a mind.

Now all the examples of the form of anæsthesia which has just been described occurred in patients whose chief symptoms were mental, and we are justified in concluding that these were due to lesions—functional or organic—situated in that part of the nervous system which is the physical basis of mind.

In support of this view there is an observation of some importance. In cases of extensive distribution of the anæsthesia the mouth and pharynx are involved, and the patient does not feel the prick of a pin in those parts. But the pharyngeal reflex is present, showing that the lowest level is intact, and therefore that the anæsthesia is due to disorder in the highest levels.

It follows, then, that the parts most represented in sensation in the physical basis of mind are just those parts which are most frequently anæsthetic in these disorders, viz. the backs of the fingers, or in greater degrees of reduction the forearms and hands and legs. According to Dr. Hughlings Jackson's principles, these would be the last sensory areas to be completely evolved, and sensation is in them the least organised and most unstable, and the areas which are most rarely affected would be the most organised and the most stable, and sensation would be here most completely evolved.

Further, the parts which are most rarely involved in this form of anæsthesia are just those parts which are apt to dominate consciousness in mental disturbances in general. The epigastric aura, so common in the epileptic, immediately precedes the loss of his consciousness, or in other words the abolition of his mind. And how frequently do we meet with cases of insanity in which the patient refers all his trouble to his abdomen! His bowels are blocked up and the abdomen is distended with food; he has a snake in his abdomen, or a voice talks to him from there, which he refers variously to his own conscience or to some animal or spirit there. Again, when we receive some dreadful news we have an indescribable sensation in the abdomen. The very names "hypochondriasis" and "melancholia" recognise this symptom. In common parlance, a man *vents his spleen* against another, and sympathises with him *from the bottom of his heart.*

Many of the Semitic races to this day regard the bowels as the seat of the passions. And there is plenty of evidence that this view was held in ancient times. I quote two passages from the book of Jeremiah. "Is Ephraim My dear son? is he a pleasant child? for since I spake against him I do earnestly remember him still; therefore My bowels are troubled for him: I will surely have mercy upon him, saith the Lord." And again, after lamenting over the wickedness of Jerusalem, he says, "My bowels, my bowels! I am pained at my very heart, my heart maketh a noise within me, I cannot hold my peace, because thou hast heard, O my soul, the sound of the trumpet, the alarm of war."

All this has a very practical bearing in the treatment of the indigestion complained of by the majority of insane patients. Of what use to them are "liquid peptonoids," alkalies, and indigestion nostrums in general, when their discomfort is merely due to their consciousness being dominated by their abdomen on account of mental reduction?

The way in which these facts are to be regarded is as follows: in the physical basis of mind the whole body is represented in sensation; in mental disturbance the most unstable parts suffer first and most (those areas which represent the arms and legs especially); then and not till then do the neighbouring most stable parts rise into consciousness, especially those parts representing the abdomen. This is a popular way of putting the matter. It would be more accurate to say that the abdomen passes from subject-consciousness into object-consciousness.

The meaning of these facts is in some respects not quite clear. It is easy to understand why sensation round the pelvis and abdomen should be early in its complete evolution: firstly, for the necessary appreciation of the desire for food; and secondly, for the purposes of perpetuation of the race. It is more difficult to understand why sensation in the feet should be early in its evolution, and still more difficult to understand why the backs of the fingers should be the very last sensory areas in evolution.

In conclusion, I may say that I feel that no apology is necessary for my bringing to your notice the above observations, even if my explanation of them is unsatisfactory. A science can only be built up after multitudinous accumulation of facts, and we must not be disappointed if facts must temporarily

remain unexplained. By way of summary let me say that comparative hemianæsthesia is a much more common symptom in the insane than is usually supposed ; that the universal anæsthesia occurring in stuporose cases is spurious ; and that a variety of anæsthesia—hitherto undescribed—is liable to occur in melancholia, post-maniacal stupor, and dementia. I submit these observations for discussion, and for suggestions as to the explanation of these obscure but interesting phenomena.

[Read at the Annual Meeting of the Medico-Psychological Association, London, 1899, but not discussed. The consideration of Dr. Stoddart's communication will form part of the agenda at the next General Meeting.—EDS.]

Night-nursing and Supervision in Asylums. By F. ASHBY ELKINS, M.D., Med. Supt., Leavesden Asylum, and JAS. MIDDLEMASS, M.D., Med. Supt., Sunderland Borough Asylum.

WE think it will be generally acknowledged that the problem which the treatment of noisy, destructive, and dirty patients sets to their medical officers is greatest as regards their management at night. It is then undoubtedly that noise, destructiveness, and dirty habits have the greatest chance of getting free play, and it is then that the efforts for reformation have to be greatest. If these efforts are successful considerably more than half the problem will have been solved. It is to this part of the question, viz. the supervision of such patients during the night, that we desire in this paper to direct attention. At the outset it may be stated that our proposals are not theoretical. They are the result of practical experience gained during the past four years in the Sunderland Asylum. The special arrangements we propose to describe were instituted by one of us at the opening of the institution four years ago. At first a few cases were dealt with tentatively, but, as the first results were so encouraging, the number of cases was gradually increased, until all the patients who were restless, noisy, destructive, or of dirty habits came without exception to be dealt with. The asylum, situated at Ryhope, is a small one, containing only 350 beds, and on this account, as well as because it was new,

it was conveniently suited for such an experiment. It may be well before going further to describe the arrangements now in existence there. There are 175 beds for each sex, made up as follows:—45 single rooms, one fully padded, and 2 half-padded; 2 small dormitories of 7 each, 2 of 13 each, 2 of 19 each, and 2 of 26 each. In the last two there is a night attendant, and one also in one of the dormitories for 19, which is the hospital ward. There is, in addition, a head night attendant who visits the patients in these dormitories and also all the remaining patients every hour, or oftener when necessary. There are thus 4 of a night staff for 175 patients. Though this is probably a large proportion compared to most public asylums, it is not claimed as a new departure in asylum management, as we are aware that in a number of asylums the advantage of having a large night staff is fully realised and acted on. The essential feature of the arrangements at Ryhope, to which we wish to direct attention, is the selection of cases placed in dormitories under constant supervision. Of course, all epileptics and suicidal patients are placed there. But, in addition, all recent cases of whatever kind, all dirty and destructive cases, and those who sleep badly and are in consequence inclined to chatter or be noisy, are also placed under constant supervision. Looked at from the other side, all single rooms and dormitories not under constant supervision are reserved for quiet and well-behaved patients who do not require any special attention during the night. This plan has been found to work exceedingly well, and since it was organised we have never had occasion to think of adopting any other. Another testimony to its effectiveness is that those of the staff who have the actual supervision of the patients and have had experience in other asylums are unanimous in their opinion that the arrangement is a very decided improvement. This opinion, let it be observed, is not based on the ground that now their duties are lighter than they were, because, as a matter of fact, they are more onerous.

The objection to this system of placing all restless and noisy patients in association which will first occur to every one's mind is that the sleep of many patients will be liable to be disturbed by one noisy individual. We readily and without reserve grant that the system is not a specific warranted to be applicable to and to cure every case without exception. But, on the

other hand, we would emphatically state that the cases to which it is not applicable are altogether exceptional. Since the system was fully organised at Ryhope it has never proved to be inapplicable to any *recent* case. This, be it remembered, is in an asylum where the percentage of cases admitted who are general paralytics is abnormally high, and where the admissions include many epileptics and acute cases of all kinds. After all, when looked at theoretically it is merely taking one step further along the road towards which all recent efforts to improve the environment of the insane have tended. One thing after another has been done to make life in an asylum as like a sane life as it can be made, and each effort in this direction has, on the whole, been rewarded with success. It has never to our knowledge been objected that, because certain exceptional cases fail to be reached by these efforts, they should on that account all be abandoned. On the contrary, it is or ought to be regarded as a call to put forth fresh efforts to obtain the desired end. As regards the night arrangements which prevail in most asylums—and we say this without the least desire to make invidious comparisons,—it will probably not be contended that they by any means approach those of a general hospital, which we think ought to be the model which we should strive to obtain. The system in use at Ryhope is intended to be an approach to that model, and the results of its practice for the last four years have been such that we think a decided advance has been made.

The practice at Ryhope is to place at night every patient on admission in a dormitory under special supervision, no matter what the mental state may be. We take it for granted that in practically all asylums such a plan is carried out for admissions, except those who are delirious and inclined to be noisy at night. If, however, such patients are treated like the others, it will be found that the idea that they must necessarily be treated otherwise very quickly passes away. A suicidal patient, even if noisy, would not be consigned to a single room, and we consider that noisiness alone ought to be regarded as a sufficiently strong reason for keeping a patient out of a single room. It will probably be a surprise to most people who carry this out systematically to find how very few cases, if any, cannot be so treated. We have often been surprised to find how much custom can do to render a person who is asleep

oblivious to pretty loud noise. On several occasions we have gone to a large dormitory late at night, and found one patient talking so loudly that she could be heard quite easily outside the door; yet on entering the room we have found every other patient asleep. Common experience also testifies to the same thing, provided the noise be not too loud. It is found, indeed, when put to the test of actual practice, that the disturbance which results from placing all talkative patients in dormitories is seldom of serious importance.

It need not be denied that occasionally a patient is so noisy as to disturb others in the same room. But when it is considered that, as a rule, patients in asylums go to bed at eight and rise at six, being thus ten hours in bed, it seems justifiable to expose them to the risk of occasionally losing two hours' sleep by being disturbed by some noisy person if the patients, as a whole, are benefited. That such benefit does result we are fully persuaded; and even in the best constructed asylum we doubt very much whether a noisy patient in a single room does not frequently disturb a much larger number of people than are to be found in one dormitory. Instead of assenting to the suggestion that there is greater disturbance when patients sleep in dormitories than when they are put in single rooms, we feel satisfied that the exact reverse is the case. A patient in a single room can not only shout, but can hammer the door and shutters so effectually as to be heard all through a large section of a building. On comparison, therefore, the method we advocate is preferable.

Hitherto we have considered the question from the point of view of the other patients. Turning now to those noisy individuals themselves, we hold that there are overwhelming reasons for placing them in associated dormitories. It will, we think, be readily granted that an excited patient shut up in a small room in absolute darkness is much more likely, if awake, to be subjected to the free play of a morbid train of ideas than when in a dimly lighted dormitory in which an attendant is constantly on duty. Under the former conditions there is absolutely nothing to distract the attention from any morbid thoughts which may come into the mind. Hallucinations undoubtedly have little chance of being corrected, and the sense of loneliness also in some cases undoubtedly acts as a disquieting factor. It is true that even the placing of patients

in a supervised dormitory does not remove all sources of disquietude, but, as a matter of experience, it will be found that it is effectual in decidedly reducing the amount of noisiness. We think this will specially prove to be the case if all new patients are subjected to these conditions, and only removed from them when it is certain that they will behave during the night like ordinary sane individuals. At Ryhope the only patients who are noisy at intervals are those who have been for some time inmates of other asylums ; that is to say, there are no patients who are noisy at night except those whose tendency to night-noisiness has become confirmed instead of being corrected at the outset by sleeping under supervision in a dormitory. In contrast with this there is the fact already stated that no case admitted since the asylum was opened has necessitated, on account of noisiness merely, a modification of the practice we recommend. That such cases may be expected to occur, however, we are quite willing to admit.

A few facts in regard to the actual results at Ryhope will no doubt be interesting. We have gone carefully through the returns for last year made from each supervised dormitory, of which there are six, and the following is the result. On the female side there were 159 nights in the year when there was absolute quiet throughout the whole of the wards. Taken individually the various wards show a still better condition of things. In Ward I there were 310 absolutely quiet nights ; in Ward V, 292 ; and in Ward VI, 241. There were only five nights when four people were noisy or even talkative, and fifteen when three people were so. In the remaining nights only one or two people were noisy, and in most cases for short periods only. If a patient merely chattered for a quarter of an hour, and though no other patient was disturbed by it, the night was counted as an unquiet one. Further, we may state that it is a very rare thing for any patient to complain of being disturbed, though it is well known that many patients are ready enough to lodge complaints in regard to this and other matters, and often with very little ground.

On the men's side the facts are even more satisfactory. On 339 nights they were all quiet, and only once were there two patients noisy the same night. In Ward I there were only 12 nights in the year when there was any noise ; in Ward V, 8 nights ; and in Ward VI, 7 nights. These figures, we think,

speak for themselves. They also demonstrate very clearly how much more noisy the women are than the men.

That this state of general quietude is not due to giving hypnotics freely, so as to make sure that noisy patients are put to sleep, is proved by the amount of these drugs dispensed, of which an accurate record is kept. In 1898 the only hypnotics given to women were 102 draughts of paraldehyde, and twelve doses of sulphonal. The majority of these were given in the case of one or two patients who were troubled with sleeplessness, but it was very rarely that drugs were given to quiet noisiness. To the men there were given eight draughts and three powders, and in no case were they given merely for noisiness. No draughts or powders are entrusted to the attendants or nurses to be used according to their judgment. They are given, as they should be, on the order of the medical officer on each occasion that a patient is deemed by him to require it. It may further be stated that the number of draughts given has been steadily diminishing, as the chronic patients, who have been inmates of other asylums, are becoming accustomed to sleep better at night.

There is still another advantage in having the patients under constant supervision at night, which should be mentioned. The nurse in every dormitory receives an allowance of milk and other simple foods which she can give as she thinks desirable to any patient who is restless or talkative. It is well known that sleepiness is induced by taking food, and this is taken advantage of when occasion arises. The nurse can also devote herself to small personal attentions, such as making the bed comfortable, brushing the hair, talking quietly for a minute or two, or in many other little ways treating the patient like a child and getting her to sleep. Such kindly attentions are also a good thing for the nurse, as they make her interested in her work, call out her nursing instincts, give occasion for the exercise of tact, prevent the time from hanging heavily on her hands, and so obviate any tendency to drowsiness on her part. Her mental alertness is also assisted by the fact that it is made her duty to enter in her report every hour whether certain patients under her charge are asleep or not, and in the morning she has to make out sleep charts regarding individual patients, whose habits in this respect it is desirable that the medical officer should see from day to day.

Another benefit which we think results from this plan is that there is less noisiness during the day. It is our opinion that this has been demonstrated at Ryhope, and we attribute it chiefly to the fact that the patients as a whole, and especially the restless patients, get more sleep than by any other plan, though we think it may be partly due to the smallness of the wards, the largest of which contains only thirty-two patients.

In the case of patients who are apt to be destructive, the advantage of the method advocated will be obvious. In a single room there is practically no check to this habit, and the result in many cases is that in the morning the floor of a room may be literally covered with fragments of sheets, blankets, bedding, and everything the patient can get hold of and tear. This may add to the picturesqueness of the clinical features of a case, but it is costly and wholly unnecessary. In a dormitory under supervision it will be obvious that such a thing could not possibly occur, and as a matter of fact at Ryhope the number of things torn during the night has been abnormally small. During last year they numbered only three shirts torn by two male patients.

The care of wet and dirty patients during the night has always been a problem which has called for solution. While we do not claim that the method we advocate will entirely solve it, we have no hesitation in saying that it will reduce the evil to very much less appalling dimensions. It is quite patent that a partly demented patient put in a single room on account of a tendency to such habits is being placed under the worst conditions possible for their correction. In a dark room it is little wonder if the calls of nature go unheeded when there is no ready means of finding the necessary vessel. And even when the room is lighted, the patient may be so demented that he will not avail himself of what means exist. In such cases the attendant who only visits occasionally during the night must often be absent when the calls of nature ought to be attended to, and he is therefore likely at his visit to have his time occupied in changing bed linen already foul. In a dormitory, on the other hand, the attendant is always present. He can go at regular intervals to any patient with faulty habits and rouse him, or he can at once attend to any indication that his services are required. If, in spite of this, the patient's evil

habits continue, he can be roused more frequently, and it will be found that even a dement is capable of a very surprising degree of education in this respect when he is raised pretty frequently, every hour if necessary. Again, however, we do not claim that this plan will succeed in every case, or that wet and dirty linen will be unknown if it is adopted. But we do claim to have effected so great a reform in the case of patients who came to Ryhope with a bad reputation in this respect, that it is quite a usual thing to have not a single wet sheet in the morning. Under the term wet is included any wetting or soiling greater than two or three square inches. There are occasional occurrences which are probably unavoidable, such as epileptic fits, attacks of severe diarrhœa, of feeble old people with paresis of the bladder and rectum, and of spinal disease with paraplegia. All others, however, we look on as the result of carelessness or want of attention, and therefore as avoidable. If a patient shows any tendency in this direction he should at once be placed in a supervised dormitory and special attention paid to him. The result will more than repay any trouble taken. One of the most obvious good results is that the patients always have a clean dry bed to sleep in, and that correct and cleanly habits, instead of the reverse, are maintained. It may here be stated that the raising of patients is never carried to such an extreme that they are rendered miserable by it. On an average only 15 patients out of about 330 are raised oftener than four times in a night, and over and over again we have seen patients fall asleep within two or three minutes of their being replaced in bed. Another good result is the diminution of foul linen requiring washing. We consider it is a change in a good direction to reduce the laundry staff and make a corresponding increase in the number of night nurses and attendants. Still another desirable result will be that the odour inseparable from a room which has been occupied by a dirty patient need no longer have a chance of occurring.

An analysis of the returns already referred to gives the following results. On the women's side there were 171 nights when no foul linen was reported. Taking each ward separately the figures were—for Ward I, 216 nights; for Ward V, 338 nights; and for Ward VI, 309. For the whole year there were 277 wet sheets and 103 wet night-dresses. On only

3 occasions was there a wet mattress. As regards the men the figures were—224 nights without any wet or foul linen. In the individual wards they were respectively—in Ward I, 291 nights; in Ward V, 312 nights; and in Ward VI, 354 nights. During the whole year there were 141 wet sheets and 124 wet night-shirts. On 4 occasions the mattress was wet.

We give these figures as correct because the way in which the beds are made up is such that a dirty sheet is seen on our frequent inspections without the blankets being turned down; and because of the way in which the dirty linen is checked. The night return for each ward is signed by both day and night attendants, and the foul linen is marked on it. As these individuals are frequently changing it is well-nigh impossible that there should be a wholesale conspiracy to make false returns. Further, the returns of articles washed in the foul laundry, where there is absolutely no inducement to keep down the amount of linen returned as such, have been examined, and found to correspond with those made from the wards.

There is no doubt that as in the case of noisiness, so with dirty habits; chronic patients, accustomed for long to sleep in single rooms, will give a great deal of trouble before they are satisfactorily reformed, although reformation is more easily accomplished in the case of the dirty than the noisy. At first some patients got violent and strongly resented being roused. But as they came to understand why they were roused, and that if they kept themselves clean they would not be disturbed, their habits improved, and we find that some of them can safely be allowed to sleep in dormitories not under constant supervision without the habit again manifesting itself. If it did they would at once be removed to a supervised one. It will be seen that these facts completely meet any objection that might be urged to the very frequent rousing of patients with consequent disturbance of sleep. This may be necessary for a time in order that the habit may be broken, but our experience is that when once this has been accomplished frequent raising is not required. As in the case of noisiness, it is the chronic patients who give the most trouble; but the reward of persevering attention to faulty habits is much more certain of being reaped than in the case of noisiness, and we have no patient, except those subject to organic disease accounting for it, who gives any trouble by reason of dirty habits.

As a result of our experience at Ryhope we think that the number of single rooms in asylums may be reduced with safety to a much smaller proportion than is at present usually recognised as necessary. The only patients who, in our opinion, require single rooms are those with homicidal tendencies, and these are comparatively rare. Such cases can be placed, as they are at Ryhope, in rooms opening off the dormitory. We would also consider it advisable that a few single rooms, some of them padded, might be provided for cases of acute excitement or of restlessness associated with senility, although there has been no necessity at Ryhope to use a single room for such a purpose. Every patient should be placed in a dormitory as a matter of routine, and only removed from it when there is a decided advantage to himself or others to be gained thereby. Thus the cost of a new asylum may be very considerably reduced by limiting the number of single rooms; and it will be a wiser policy to devote some of the money so saved to increase the night staff.

As to the number of patients who can be looked after at night by one nurse in a dormitory, we would say that, in a hospital ward with acute and feeble patients, we would place the limit at 25; of quiet chronic patients requiring raising or attention during a fit the number might be between 40 and 50. For those who are not under constant supervision smaller dormitories of 6 to 15 are better.

We would suggest, then—(1) That the night arrangements in asylums be closely approximated to those which exist in general hospitals. (2) That all acute, noisy, dirty, and destructive patients be placed at night in dormitories under constant supervision, and be removed only when it is evident that they have ceased to require such special care.

The adoption of this method is, of course, attended by a good deal of initial difficulty and complaint; but we have no doubt of its ultimate success if fairly tried. It has been seen at Ryhope by several whose opinion is entitled to great weight, and their favourable comments as well as our own experience have encouraged us to prepare this statement.

Discussion

At the Annual Meeting of the Medico-Psychological Association, London, 1899.

Dr. Hitchcock: In the York Asylum this system has been in use for the last twelve years with entirely beneficial results. I have never given any sleeping draughts, and for many years have entirely abstained from giving any sedatives whatever, for I am quite satisfied that in asylum treatment that is the best course. Sedatives or narcotics may be required in incipient insanity, or in cases of sleeplessness which might terminate in insanity if not so treated; but those patients who have been treated with large doses of narcotics are invariably more difficult to deal with, and their mental condition is all the more unfavourable in my experience.

Dr. Conolly Norman: There are a number of things in this paper which commend themselves to all of us, and express the views that most of us entertain. It is now the general rule to treat patients, when they first come to us, as much as possible on the lines of a general hospital until some circumstance arises to justify other methods. I had lately to record in one house, containing 780 patients, seven consecutive nights without a wet bed. But there are other things to consider besides these elementary questions; and it surprises me to find that proper supervision is supposed to connote large dormitories. Owing to my asylum being old and badly built, I have vast dormitories, and I find them very inconvenient. Many patients complain of disturbances occasioned by a number of persons sleeping, or trying to sleep, in one room. I had an eloquent letter recently from one complaining of the noise made by an occupant of his dormitory, whom he designated an emissary of Satan. I remember an accident which happened in a dormitory where, when the nurse's back was turned, the exasperation which had been produced by noisiness led to the fracture of the noisy patient's skull. Going through the dormitories at night—as I sometimes do—I feel very much for the victims of this system of treatment. It is an old system which has been forced upon me; it is one which in my experience is entirely bad; and I sincerely hope it will never be my fate to be one of a number in such a dormitory. I could not answer for the consequences.

Dr. Oswald: I have given the plan advocated a trial, and I believe it is the general custom not to put new patients into single rooms; they are almost always placed under observation. I do not think that a row of eight or ten single rooms permits of a fair trial. More attention should be paid to "sleeping rooms"—that is to say, rooms so constructed that the patients occupying them shall have the best chance of sleeping. I have been compelled to remove noisy patients from dormitories because they were disturbing others, and have had to place them in single rooms. I have done this reluctantly, because observation in these rooms is less efficient than in dormitories. I do not think that we ought to sacrifice the sleep of many for the sake of one, and cannot agree with Dr. Middlemass and Dr. Elkins when they say that in the construction of new asylums the single rooms ought to be fewer. They ought to be differently designed. Every ward should have a number of bedrooms opening from it. I prefer to call these "privilege rooms." I think it is a privilege for a patient to have a bedroom of his own, not only from a social point of view, but also because such an arrangement distinctly increases the chance of recovery.

Sir John Sibbald: I have listened with much interest to this suggestive paper, and to the discussion upon it. One of the most important things which I have observed in the management of the insane is the great improvement in the nursing. Night nursing especially has made very great progress during my experience. The first asylum with which I was acquainted contained about 800 patients. A man—called the "night watch"—was the only representative of a night nursing staff. We have made very great progress since then, but we have still a great deal more to do in the development of this department. Although Dr. Campbell Clark has at Hartwood as large a night staff as there is in any asylum of the same size, and although Dr. Oswald has also a well-organised night staff, and although the night staffs in Scottish asylums are very much larger and better than they used to be, at the same time I think that in many asylums still further improvement can be made. It seems to me that the paper under discussion is an honest attempt to

develop night nursing, and to make the personal care of the nurses for the patients more thorough than it has been.

Dr. HUGHES: From the experience which I have had in the management of the insane, I am of opinion that dormitories, as a rule, are objectionable. I mean associated dormitories, where an individual is cognizant of the fact that he is constantly under the personal surveillance of some other person. You know how it feels to a sane man to be under the impression that he is constantly being shadowed by some one. Now in the psychical therapy of mental aberration it is important that in all our dealings with the insane we should, so far as practicable, prevent the patient from receiving the impression that we are constantly shadowing him. For that reason, in the institution over which I have the honour and pleasure to preside, I have invented a lock that does not necessitate the turning of the key upon the patient. I am opposed to associated dormitories even in large hospitals, because of the insanitary psychical influence that one patient in an adjoining bed with his suffering and ailments has upon another. Generally patients, like ourselves, have troubles enough of their own. Melancholic patients may be benefited in asylums, but not by the use of associated dormitories. If you can associate them with other patients who will sympathise with them, they will have the most elevating impression upon this mental condition, but there is an objectionable feature about constant observation. The whole question of the management of the insane, so far as we are concerned, resolves itself into one of psychical therapy, and it is one of individual as well as collective psychical therapy. Wherever we can adapt our rooms in such a way as to ensure the most salutary effect, here we have progressed in the direction of proper therapeutics. In conclusion I will say that as sleep, which does so much for men in all states of life, is the best therapeutic agent that we have in the treatment of mental aberration, anything that will conduce to that end in hospital arrangement is right, and anything that violates the principle of securing tranquillity and rest is wrong.

Dr. JONES congratulated the authors of the paper upon the very excellent results obtained, and which his own experience confirmed as due to painstaking personal supervision.

Dr. MIDDLEMASS: I am glad that the paper has met with favourable appreciation. We did not wish to claim any credit for the arrangements made, but wished merely to record that the experiment had been eminently successful, and to encourage others to try for better results than we have at present obtained.

Punishment the Painful Consequence of Conduct. By CHARLES MERCIER, M.B.Lond.

THIS question of the punishment of the insane is one which has gone through certain stages. You will remember that in Edinburgh I read a paper in which I laid down three propositions. The first was that no insane person should be punished with the same severity as a sane person; the second was that some insane persons ought not to be punished at all; and the third was that the majority of insane persons ought to be punished for a large number of their wrong-doings. To these I added a fourth as a rider, that, as a matter of fact, punishment is already largely used in the treatment of dealing with

insane persons. To this it was retorted that certain measures are taken with respect to insane persons, which, if they were taken with respect to sane persons, would be punishment, but as taken with respect to insane persons they are not punishment. In other words, we do punish the insane, but we shrink from acknowledging that we do so. Now there is one aspect of this question which I have put several times, and regarding which I have never yet been answered in any way, and I desire to put it again, and in order that there may be no mistake about it I will put it in a very concrete form. Our excellent Treasurer is entrusted not only by us with the finances of this Association, but he is also entrusted by his county with a share in the management of the county affairs, and it is within the bound of possibility that Her Majesty might entrust him with the Commission of the Peace, if he has not already been so entrusted. It may happen that at the trial of a prisoner—we will say supposing a man has thrown a pint pot through a pane of glass—he will come before our Treasurer, and he will be fined a certain sum of money, or, in the alternative, will be awarded certain imprisonment; we will say he is fined 5*s.* or seven days. Then our Treasurer quits the bench and goes back to his own institution, and finds there a patient who has thrown a mug through a pane of glass, and he says to that patient, "You have destroyed this pane of glass, you will have to pay for it;" or "your pocket-money will be stopped for the amount."

I want to know wherein the difference lies between the 5*s.* which is taken from the prisoner in court and the 5*s.* which is taken from the lunatic in the asylum. I say if the one is punishment the other is also, and I say you cannot by any verbal quibbling discriminate between the two. The whole thing raises the question of what punishment is, and I have formulated in the notice convening this meeting the terms in which, as I take it, punishment should be defined. Punishment I have called the painful consequence of conduct. We find ourselves in a world in which we are capable, within limits, of determining our own conduct. Some of our acts result in pleasure, and some result in pain; and when an act results in pain, the pain is the punishment for the act. Furthermore, man is so constituted that when an act results in pleasure he has a tendency to repeat the act, and when an act results in

pain he has a tendency to avoid its repetition ; and we say that the punishment is a deterrent to the repetition of the act. These are commonplaces, but they are also facts which are fundamental in human nature. Man's motives to conduct are the seeking of pleasure and the avoidance of pain. To take a few concrete instances : if I dash my hand against a brick wall I suffer pain, and that pain is the punishment for the act. The pain is the painful consequence of the act, and it is a deterrent which advises me not to repeat the act. If I expose myself to infection and catch it, the pain that I suffer, the disability that I suffer while I am under the infection of the fever, is the punishment for the conduct which brought me into the infection. In the same way, if I indulge in the habits of eating and drinking too much, I may suffer from gout, and the pain of the gout is the punishment for the conduct which brought the gout. But we live in surroundings which are not only physical, but which are also social, and our conduct towards our social surroundings is also liable to entail pain or pleasure, as the case may be, from the reaction of our fellow-creatures upon us with respect to our conduct with regard to them. When we receive pleasure from our social surroundings our tendency is to repeat the act ; when we receive pain our tendency is not to repeat the act, but to avoid its repetition. The punishment that we receive from our social surroundings in return for incautious acts committed towards them is precisely the same as punishment we receive from our inanimate surroundings for incautious acts committed towards them. It is neither more nor less certain, neither more nor less severe, neither more nor less delayed, neither more nor less capricious ; it is the same in every respect. Dr. Rayner has said, and it has been implied by others, that the feeling of revenge that enters into the punishment that we receive from our social surroundings differentiates these punishments from those inflicted by our inanimate surroundings. It is perfectly obvious from the point of view of the punishee that it does not matter in the slightest degree what may be the motives of the punisher. The pain that we suffer from our own actions has the same deterrent effect upon us whether it is inflicted, as by a savage upon his captive, from the pure lust of cruelty ; whether it is inflicted by the Holy Inquisition from pure benevolence ; or whether it is inflicted by the impartial action of natural forces. In any case the

pain that we suffer is the consequence of our act, and is a deterrent from the repetition of the act. Now, if it is to be maintained that the insane are under no circumstances to be punished, then I submit we must overturn the entire order of the universe in their favour. We must provide that when they fall they do not hurt themselves; that is their punishment for falling. We must provide that when they are exposed to cold they should not take pneumonia, for that is their punishment for exposing themselves to cold. We must provide that when they are exposed to infection they do not take disease; we must provide that when we prick them they do not bleed, and that when we poison them they do not die.

It will be said that this is pushing the matter to an absurd extreme, but I wish to point out that it is important that those who advocate the entire immunity of the insane from all forms of punishment, an immunity which none of you carry out in practice, should be made to recognise what their position involves. If the insane are under no circumstances to be punished, the only justification for that view is that upon them punishment has lost its effect—they are no longer capable of being deterred from an act by the foresight of the painful consequences which that act is likely to incur. Is this the case? Is it the case that the insane are destitute of all prudence, of all regard for the consequences of their acts, of all capability of learning by experience? Is it a fact that no insane person who has once sustained an injury will take the slightest precaution against similar injury in future? Is it a fact that the thousands of insane who are employed as artisans take not the slightest precaution against injury to themselves during their work? Is it a fact that the thousands of insane women employed in laundries take not the slightest precaution against injury to themselves by scalding? Is it a fact that every insane person who has the command of money, squanders that money in a reckless fashion? Is it a fact that every insane person is incapable of restraining himself from acts which bring their punishment afterwards? Who will answer these questions in the affirmative? and unless they are so answered it is impossible to maintain that the conduct of the insane is not influenced by the fear of ill consequences,—that is to say, by the fear of punishment. But although the effect of punishment on conduct is rarely completely abolished in the insane, it is probably always

modified, and it will be instructive to note the ways in which the effect of punishment may be altered. Conduct is the result of the attraction of pleasure and the repulsion of pain ; but I may put it otherwise, and say that conduct is the result of the struggle between the impulse to act and the power to control the act. So regarded, insanity may diminish the effect of punishment in one of two ways. It may increase the impulse to act, or it may diminish the power to control the act. It may increase the impulse to act by increasing the impulse to action in general, as in acute mania; or it may increase the impulse to act by exaggerating the appetite which prompts the action, be the appetite of lust, of ferocity, of greed, or what not ; and undoubtedly in many cases the power of restraining action is damaged among the insane by these causes. Again, the power of control may be weakened in several ways. In the first place, memory and anticipation of pain may be weakened ; the foresight, the appreciation of the result of the act, may be diminished, while the memory of the pain is unimpaired. Again, foresight remaining intact, and memory of pain remaining intact, it may happen that the pain, instead of being a thing to be avoided, may be a thing to be sought, as in the cases where a lunatic has committed an act for the very purpose of incurring the painful consequences of the act ; and it is probable that the power of control may be weakened *simpliciter*. That is to say, the foresight of the result of the act may remain, and the memory of pain may remain, and the patient may still desire to avoid pain, and yet an anticipation of subsequent pain has little or no power to outweigh the influence of immediate pleasure, and this is very largely a matter of habit. It is obvious that where these disorders obtain, punishment is not to be inflicted. I now await with patience the observations of those gentlemen who will tell me that I advocate the unrestricted punishment of the insane under all and any circumstances. I still maintain that few of the insane are wholly insane ; that in the majority of the insane there is a sphere of conduct, small in some, but large in others, within which they are controlled by the same motives as govern the sane, and that within this sphere of conduct punishment is effectual, and is therefore justifiable. I maintain, again, that my thesis is proved by the fact that punishment is constantly used in controlling the insane, and is constantly found effectual. That this

is done cannot, I think, be denied. It is said so long as we refuse to apply the word "punishment" no harm is done, but that if we give to our treatment its proper title, we at once open the door to all sorts of brutalities, and thus the power that resides in a name receives one more illustration. Well, gentlemen, if I thought you were intellectual babies, I should have fed you upon intellectual pap; but I have more respect for you than to make such a supposition. When M. Jourdain discovered that he had been talking prose all his life, we do not find that he immediately became prosy. When a sceptical priesthood at last admitted that the world did turn round, we do not hear that they immediately became giddy. When you gentlemen admit, as you will have to admit, that you do upon occasion punish your patients, and that they derive benefit from the process, I have not the slightest fear that you will go home and place all your patients in irons and distribute a cat-o'-nine-tails to each of your attendants. The moral of all this lies in the application of it. Whether you now admit the principle that most of the insane may rightly be punished for some of their wrong-doings does not much matter, because you will have to admit it. What does matter is what this admission involves. It involves the doctrine of partial insanity. I did not look to have to argue this at this time of the day. It seems to come upon some as a shock; it makes their flesh creep even more than the other proposition, but, like the other, it will have to be admitted.

Discussion

At the Annual Meeting of the Medico-Psychological Association, London, 1899.

The President.—As an old Superintendent, and as President of this Association, I feel that I must enter my protest against the idea of anything in the shape of punishment, as generally understood, being necessary in the management of our patients. For the last eighteen years I have had to do with a large number of turbulent lunatics, and I can stand here to-day and say for myself, and I am sure for many of my *confrères*, that there is nothing that could be called punishment inflicted in our asylums. If you like to call the deprivation of a privilege punishment, there may be something of that,—as, for example, if a patient is given tobacco for doing certain work, and if by some chance he misconducts himself, we may tell the patient that he shall not have his tobacco the next day; but punishment such as was described in the highly supposititious case mentioned by the last speaker is quite unknown to me. There are many able and experienced men here this afternoon who will be able to refute Dr. Mercier's very academic way of presenting this matter. I only desire to say how much I regret that this question of punishment has cropped up again. I should be very sorry indeed if the doctrine of partial insanity should lead to the re-introduction of punishments into asylums.

Dr. Hayes Newington.—I had not intended to speak on this subject again, for

I felt sure that if only we kept off the larger question of the responsibility of the insane, it would resolve itself into a question of nomenclature. One gentleman calls it punishment, another deprivation, another treatment, and so on. But Dr. Mercier has roused me from a state of lassitude dependent on the labours of the last two days. With regard to the imaginary case which Dr. Mercier has mentioned, I think I should be very likely to fine the gentleman five shillings or five days; but I do not think he is right in saying that I should go home and fine a patient five shillings for a similar offence, because never in my life have I made such a charge, and I never purpose to do so. I think the real punishment is to go to the patient and say, "This is coming out of my pocket; don't do it again." It often makes him ashamed. I think Dr. Mercier fell into a great error when he said that if we were to guard patients against punishment we must guard them against painful consequences of falling or otherwise hurting themselves. I do not think he is right in arguing as if the painful consequence of any action is necessarily punishment. That is utterly foreign to the question. However that may be, if you are going to use the word "punishment" you must sooner or later draw the line somewhere, otherwise you are bound to follow out punishment in an asylum just as you would anywhere else. But you cannot punish the insane as you do the sane. You must have an artificial line, which will depend very much on the person who draws it. There are certain ideas or elements which are inseparable from punishment: the first is the amelioration of the person punished. That may be all right, but I think I have indicated a better way of ameliorating the condition of the patient who has to be treated. The second idea is something far worse, and that is the encouragement of others not to do the offence. Would it not be a horrid idea to get about in all our asylums that "if you do this, you get that"? That, to begin with, destroys the idea of an asylum, and imparts the idea of a prison. The third is the idea of *lex talionis;* some mischief or inconvenience has been caused to some one, which must be compensated by inconvenience or other means. If a patient is secluded and deprived of his dinner and certain things, he will not only believe that that deprivation is inflicted on him to cause pain, but he will think also that there is a little revenge on the part of the person who has inflicted it. I think that also would be a most horrid idea to get into an asylum. It would destroy the position of the physician altogether. If there is anything in what Dr. Mercier says, where are you going to stop? You must, if you once commit yourself to put a certain amount of disability or inconvenience by way of punishment on a patient who does a certain thing, go on with it; you must go one better. That is the great evil; once admit the idea of punishment, and we give ourselves away altogether,—not only to the public by giving it the opportunity of saying very harsh things about us, but also to the patients and the staff by putting into their heads a notion that is utterly hostile to the idea of an asylum.

Dr. Conolly Norman.—In speaking to a paper lately read by Dr. Drapes I ventured to digress into theoretic regions, saying that punishment might be divided into two classes; that which is vindictive, and that which merely consists in exposing the individual to the consequences of his actions. Perhaps I obscurely expressed the idea which Dr. Mercier has put before us; but I think he goes too far, and much as I admire his habit of close thinking, we must admit that we do not live by logic. If we pursue our theories to their logical consequences, and if they land us in an *ad absurdum*, we are not bound to go on. I am quite sure that Dr. Mercier's theoretical conclusions have obscured his judgment of some of the difficulties that surround the subject. He has said that no matter what is the mode of the punishment, when pain is inflicted it is all the same to the punishee. Perhaps so, but it is not the same to the punisher. I say that on our own account we ought not to punish our patients. Besides, is it not the object of our lives to protect our patients from the natural consequences of their acts? Our professional position depends upon that principle, and nothing else. Punishment, I am glad to say, in the ordinary sense of the word, is as little known now-a-days in Irish asylums as it is in English; but I have many years ago seen punishment in asylums in various countries, and the results were neither pleasing to see nor beneficial to the patients. I do not go into the fine distinctions which Dr. Mercier has drawn; for of this I am certain, from the results of my own experience, that any system of punishment of patients will demoralise our staff. However much we may admire Dr. Mercier's airy abstractions, practical considerations must outweigh all

his arguments. Introduce into your asylum the idea of punishment, and you and your staff will be demoralised.

Dr. RAYNER.—I entirely disagree with the treatment of patients by punishments, and am quite sure that such a system would be most harmful to patients and staff. At the risk of seeming egotistical, I will mention the case of a man with hallucinations of hearing, rendering him very dangerous. He believed that he was being acted upon by outside influences, and especially by the superintendent of the asylum in which he was. After having been in St. Luke's and Colney Hatch he was transferred to Hanwell. Before he had been there long he had the same ideas with regard to me, and whenever he had the opportunity he would rush at me. If he could not get at me he would spit at me, and if I were within earshot he would shout at and abuse me. I did not punish that man in any shape or form. On the other hand, I treated him with exceptional kindness, and made him an object lesson to the staff. At the end of a year that man had no greater pleasure in life than to pick up tennis balls for me when I was playing.

Dr. URQUHART.—When a question like this crops up we must, for the time being, detach ourselves from the asylum point of view. An asylum is a very special place, and the work of an asylum is very highly specialised. After many years we have found that certain fixed, unalterable rules must be adopted in dealing with our patients if the asylum is to be conducted for the best. We are advocates for the insane in seeking to protect them from the consequence of insane conduct. It is not for us to adopt punitive measures, but to say how far the insane person is accountable for his actions. The person who has to deal with punishments is the judge. It is a question of law, and we ought not to interfere with lawyers in their apportionment of punishments except to make sure that, from the scientific point of view, the judge has every information which we can give him. I entirely decline to put myself in the position of a judge in these matters. For the staff at any rate, an asylum is a school for all the Christian virtues; and we know that the official who repeatedly attempts to punish the insane is emphatically not a person whose services will prove satisfactory, nor one who can be trusted with the high duties of an attendant upon the insane. It is not a question of what the public will say, nor of our own comfort or convenience, but what is the best thing for the patients who are entrusted to us. I am sure that Dr. Mercier has been misunderstood, and that he is viewing the matter from a wider point of view. He has come to the conclusion that a person who is partially insane must be partially punished. We have already a precedent for that in Scotland. We all know that Laurie, the Arran murderer, was not found insane; that there was a commission who examined him after he was condemned to death; and we are credibly informed that the commission could not say that he was insane, but only went so far as to state that he was so deteriorated mentally that he ought not to be punished with the full rigour of the law. He is now in the Peterhead Convict Prison. If he had been insane he would have been sent to the Criminal Asylum at Perth; if he had been fully responsible he would have been hanged; but he remains an ordinary convict for life because he was sufficiently responsible for his actions to be punished, yet insufficiently responsible to be executed. That result is a triumph for medical science and an honour to Scottish administration.

Dr. YELLOWLEES.—The case Dr. Urquhart has referred to is, so far as I know, the first recognition on the part of the Crown that there is such a thing as partial insanity, involving partial responsibility, and therefore followed by modified punishment. It is a precedent of the utmost importance. The same limited condition is true about our own patients, and I fully agree with Dr. Mercier in that respect. If they were all utterly insane, and had no power of self-control whatever, how could one manage ten or twelve such patients? Many of our patients are partially insane, and many are therefore partially responsible. I think that Dr. Mercier is the slave of his logic. Instead of saying punishment is the painful consequence of bad conduct, let us say that pleasure is the welcome reward of good conduct. Is that not a perfectly sound principle? and are we not right in acting upon it? and do we not act upon it in our asylums every day? Do we not present to our patients all the motives we can to make them behave well? and do we not stimulate them so to do by all kinds of rewards? and is that not right, proper, and wise? And, on the other hand, is there anything wrong in our not giving to a man the rewards of conduct when he

forfeits those rewards? Is there any reason why a man whom you reward with tobacco because he works well should not on occasion be told that he has been idle, and therefore cannot have tobacco? Dr. Mercier calls that punishment, and I call that a misuse of the word altogether.

Dr. MERCIER.—I am delighted to find that we are all in agreement. I thought we should all come round to the same point of view at last. The fact is that the mind of the Association has been led astray, and to a certain extent I must confess that I have been the innocent misleader. The origin of this debate at Edinburgh was a discussion on criminal responsibility, and it was in that connection that the principle was laid down, and unfortunately the thesis which I there supported with respect to persons who commit crimes out in the world—that even if they are partially insane, still they ought to be partially punished,—that principle has been forgotten, and the whole of the debate has been transported into the inside of the asylum, to which it was never intended to apply for a moment. It is true that I incidentally drew attention to the fact that we all do punish our patients in the way Dr. Yellowlees has mentioned, but that was only by way of illustration. The gist of my argument applied to those wretched cranks who commit so many crimes outside asylums. I think it is a misfortune that we should become identified, as Dr. Urquhart says we should, as advocates of the insane. It is quite right that we should be advocates of those placed under our care; but if he means that we should in all cases advocate the entire immunity from punishment of any criminal who can be in any way, however remote, identified with any trifling taint of insanity, that is, I think, very much to be deplored. A very extraordinary case has recently been before the public. A young girl in the most deliberate way poisoned her sister for the sake of some paltry insurance money, and because that young woman, who had never shown any sign of insanity whatever in the whole course of her life, was shown to have had some insane relatives, it was actually proposed that she should be immune from punishment. That was, I think, a deplorable position to take up, and I think that our branch of the profession has lately shown a tendency to press to an extreme degree the doctrine of the immunity from any punishment of persons who are partially insane. It is to establish this, which Dr. Yellowlees has so well supported in practice and in words, that persons who are partially responsible should be partially punished, that this debate was begun, and it is in pursuance of this that I have spoken to-day. If it were worth while to answer the arguments adduced against me, I might perhaps turn them against the proposers, but I think we are agreed in the main point; I hope so. I might point out that while Dr. Newington refuses to fine a patient for damages done, he inflicts upon him a punishment of greater refinement of cruelty. The patient may be a very wealthy man, to whom the value of the money would be nothing; but if he is a very sensitive man the laceration of his feelings must be a punishment of far greater severity than the loss of a few shillings. As regards the case stated by Dr. Rayner, I have been careful all through to say that the sane portion of the conduct of insane people should be liable to punishment. He answers that by saying that the insane conduct of an insane patient should not be punished, and with that I entirely agree. This debate will not have been fruitless if we find that we agree that these cranks and these persons who commit crimes in the outside world are not to be considered immune from punishment simply because some of their relatives have been at some period or another insane. If no punishment is to be applied except to persons who are perfectly and absolutely sane in every respect, you may as well abolish at once the whole machinery of the criminal law.

Refusal of Food in the Insane, with a method of Artificial Feeding not generally known. By A. H. NEWTH, M.D., Haywards Heath.

THERE are several causes which may induce refusal of food, and these have to be carefully considered before attempting to forcibly feed an insane patient.

Anorexia is one of the earliest and most common symptoms of general bodily disease. It is always present in anæmic conditions and severe affections of the stomach. It may arise from nausea, the food not being properly digested, fœtid eructations are produced, and so the patient loathes the idea of food.

The insane are generally in a very low state of vitality, and are frequently suffering from various forms of dyspepsia when brought to the asylum. The insanity may be due to a process of autosepsis caused by want of proper assimilation of food ; I fancy I have seen several such cases.

Refusal of food may arise from general apathy or indifference as to what is required for the proper sustenance of the body. It may also be due to illusions in some instances arising from disturbance of the digestive organs, or may be the result of delusions. The most trying cases are those who persistently refuse food with a determined suicidal purpose.

In febrile states over-feeding will do harm, and where there is ulceration or malignant disease of the stomach or intestines it may even cause death.

Going without food for a time may in some cases be actually beneficial. Disease of the liver, so frequently met with in insanity, is best treated by giving as little food as possible, so as to afford rest to this organ.

The value of active purgation in insanity is almost universally recognised ; abstinence from food for a few days has practically the same effect and often proves as beneficial.

In fact the danger of voluntary abstension from food has been much exaggerated. Dr. F. Siemens, in an article written in 1888, holds "that the dangers from forcible feeding, are, on the whole, greater than those which follow prolonged abstinence.

Besides the risk of injury in pushing a tube into the stomach, he thinks that there is danger in forcibly introducing quantities of food without considering the patient's diminished powers of digestion and assimilation." He surrounds his patients with all kinds of delicacies till they are tempted to eat secretly or openly, and affirms that the majority of them will never abstain so long as to put their lives in danger. Prof. L. Meyer has acted on similar principles for many years.

If these patients remain perfectly at rest,—and rest in bed is in many cases the soundest form of treatment in refusal of food, as Dr. Rayner has pointed out—Dr. Siemens says that they can do without food or water for fourteen days, and without food but with water for forty days, as has been proved by the exhibitions of fasting men. There are, however, few physicians who would carry out this heroic practice, for, if death occurred, it might be difficult to convince the coroner's jury that the death was not due to want of nourishment.

Much may be done by firmness; some attendants have the happy persuasive power of getting the most refractory patient to eat. A male patient may sometimes take food from a female nurse though persistently refusing to do so from a male attendant, or *vice versâ*. If the delusion of poisoning is prominent, it may be advisable for the attendant to partake of the food offered.

When a patient obstinately refuses food for two days, and there does not appear to be any organic or other disease to account for this refusal, and especially when it is evidently due to a determined purpose, then it becomes an absolutely necessity to compel him to take it.

There are various methods adopted for artificially feeding patients, and these may be briefly considered before explaining the plan adopted at Haywards Heath Asylum. (1) By the stomach pump. (2) By a funnel and œsophageal tube. (3) By a tube passed through the nares. (4) By administration of nutrient enemata. (5) By intra-venous injections of salt or nutritive fluids. (6) By spoon or cup feeding.

The use of the *stomach-pump* has been frequently discussed at various meetings of the Association, and many members have spoken highly of its value, having used it several hundred times with success. But it is a crude proceeding, as a rule very unpleasant to the patient and to those who are charged with

the responsibility of the case. There is always a certain amount of risk attending its use, and I have noticed, as have others, that patients thus fed are liable to gangrene of the lungs. In order to pass the stomach pump or œsophageal tube with comparative safety in a violent patient, four or even six nurses are required. In thus feeding a patient, therefore, there is a great drain on the resources of the asylum. More deaths than have been recorded have occurred from the use of the stomach pump.

The *œsophageal tube and funnel* have some advantages over the stomach pump. For instance, the fluid runs down the tube by gravitation and is not injected by force. Dr. Yellowlees' bottle is a further improvement on the funnel, but I consider that it is not an advisable apparatus for forced alimentation, for the reasons above stated.

As regards *nasal feeding*, it seems to me, after some experience, to be a most unpleasant operation, and not uniformly successful. Various ingenious devices have been designed to overcome the difficulties and objections to its use. In 1877 Dr. Anderson exhibited a pipette he had designed, and in 1888 Professor Cera, in a work on artificial feeding, described his elaborate apparatus; but it is very doubtful if either of these is now in use. Dr. Jules Morel in a letter to the JOURNAL, January, 1896, describes a method he adopts of pouring food "down either nostril, little by little, by means of a small spoon. Patients," he adds, "do not like this method of feeding," which no doubt is only too true. In spite of what Dr. Drapes said at a meeting in 1895, that "he would much prefer to have a nasal tube used on himself," I think it is very painful and undesirable to administer food by the nose, especially so when the patient is very resistive.

The administration of *nutritive enemata* is, of course, the usual routine practice in cases where patients who are not insane cannot take food, and it has been repeatedly advised in lunacy practice, especially by Dr. Needham (1879). Dr. Newington suggested in 1877 plugging the anus after giving the enema, previously washing out the bowels with soap and water. Probably in many cases enemata are the most satisfactory methods of saving life when food cannot be taken, especially if there is severe gastric disturbance.

Dr. Ritti in 1877 suggested putting a bolus of food in the mouth and causing deglutition by stimulating the muscles of

the gullet by means of *electricity*. But this requires a considerable amount of skill and the employment of elaborate apparatus. The patients, too, get accustomed to it in time, and then resist the effects of the stimulation.

In the German retrospect for 1893 there is an account of a new treatment of patients refusing food by Dr. G. Ilberg, of Heidelberg, who advises the subcutaneous *injection* of common salt in water.

Dr. Lilienfeld (*Zeitsch. f. Diat. u. Physikal-Therapie*, 1899) thinks that there is a possibility of sustaining life in desperate cases by injecting solutions of grape sugar or albuminoids into the veins. Probably the injection of warm milk into the peritoneal cavity, as is done in some cases of inanition from hæmorrhage, might be more successful than the adoption of such a dangerous procedure.

Feeding by a *spoon or cup* has the disadvantage of the force used in opening the mouth frequently causing fracture of the teeth, and that the patient if obstinate will retain the food for a time and then spit it out.

The method that has been in use, to the absolute exclusion of œsophageal tubes and other mechanical appliances, in the Haywards Heath Asylum for over thirty years, that is, so long as I have been connected with it directly and indirectly, is so simple and easy that any one can employ it. It is also perfectly successful, and has never been attended with the slightest unpleasant or untoward consequences. It is rapidly performed and fewer attendants are required; in fact, I have fed most troublesome patients in this way with only one nurse to assist me.

The patient being placed in the recumbent or semi-recumbent position, the person who administers the food steadies his head with his left arm or by holding it between the knees. A sheet is wrapped round the patient's leg, and a nurse kneeling on either side of the patient's legs, holds down the hands by the wrists, avoiding pressure on any part of the patient's body or limbs. Then the forefinger of the left hand is introduced into the cheek, which is stretched to its fullest extent. This prevents the orbicularis oris and the buccinator from acting, and thus the patient is quite unable to spit the food out of the mouth. Liquid nourishment in quantities of about two tablespoonfuls at a time is poured into the pouch thus formed by the distended

cheek, and trickles gradually down the throat. There is no need to open the teeth, for if some of the teeth are not absent, which is generally the case, there is plenty of room behind the last molar, or even between the teeth, for the liquid to reach the pharynx.

If, however, the patient obstinately refuses to swallow the food, a gentle pinch of the nose, so as to obstruct nasal breathing and compel him to breathe through the mouth, will overcome this, as he is bound to swallow in order to breathe. After feeding in this way for a time, the patient finding he is perfectly helpless in the matter, soon gets tired of resisting and takes food voluntarily.

I have not only frequently used this method on the insane in general practice, but have also employed it on young children with the most satisfactory results; and I feel sure that if it were generally known and had a fair trial, the œsophageal tube would be little heard of in the future.

Insanity and Marriage. By G. E. MOULD, M.R.C.S., L.R.C.P.Lond.

IN giving advice concerning the marriage of a person who has had an attack of insanity or who belongs to a family with a hereditary predisposition to insanity, on what considerations should our opinions be based? Firstly, on the welfare of the individuals who are about to marry and of their families present and prospective. Secondly, on the welfare of society. Our advice might have far-reaching consequences if we were only agreed on common principles.

We must bear in mind the well-being of posterity in general, for although the first is the most important and personally responsible set of considerations in regard to which we can estimate the probabilities with some degree of certainty, we must not feel satisfied unless we can reconcile the immediate future with the remote. In developing a somewhat optimistic opinion favouring the permission of marriage to persons with insane histories I hope to give some facts in favour of that opinion, not

only with regard to the persons themselves and their immediate offspring, but also with regard to the race in general. Is the hereditarily insane individual more likely to be happy, to remain sane, or to be free from recurrence of insanity, married or unmarried? I claim that the chances are on the whole largely in favour of the married, because a larger interest in life, a stimulus to work, a gratification of natural desires, a probable immunity from venereal diseases and alcoholic excesses, will counterbalance the possible disadvantages—anxiety with regard to family, incompatibility, marital excess, and puerperal dangers. The cases in which we are likely to be consulted are those who have recovered after attacks of mania, melancholia, and acute dementia, or cases sane in themselves but with a bad family history. We must take into consideration the sex and condition of the parties. The woman has possibly to face the risk of loss of the bread-winner by insanity; the man has possibly to face the loss of the mother of his children, resulting in a more or less prolonged celibate existence. I do not see so much misery among the wives and husbands of the insane as to outweigh the previous happiness of their married life,—the hope of renewal on recovery and the pleasure they take in their children. With regard to the possibility of the transmission of their infirmity to their offspring, are not the chances on the whole in favour of not one of these inheriting it? And, if it is inherited, by how many will it be inherited? The probability is that there will be a net gain of sane persons to the State. Genius is well known to occur in insane families, and the production of one commanding intellect might well outweigh many lunatics and idiots. Melancholia has frequently attacked persons of the greatest intellect and finest sensibilities, and many men of great force of character and energy, producers of most excellent work, have had attacks of mania. We take a great responsibility in interfering with the happiness of these persons or in preventing the transmission of their qualities which are more valuable in the evolution of the human race than their racial infirmity. The progeny of Ormonde, for instance, have not inherited the vices of his constitution; and we have now come to see that tuberculosis is not truly hereditary.

I have no wish to minimise the influence of heredity in regard to insanity; but when any one emphatically states that

there has been no case of nervous instability in his family I suspect his heredity.

Although one cannot catch insanity in an asylum like small-pox in a fever hospital, still as tuberculosis may be acquired by members of the same family living under the same unhealthy conditions, so insanity may be predisposed to by faulty modes of life in particular families.

The advice to stamp out insanity by a ruthless and indiscriminate prohibition of marriage is logically on a par with the opinion that all incurable lunatics ought to be put to death. If the latter is indefensible, if we are bound to afford them as much happiness as possible (just as the physician is bound to prolong life at all costs), then the right course in the former case is to urge the choice of a suitable partner, and to advise prophylactic hygienic measures for parents and children. Any defect can be bred out of any race of animals given sufficient time. But good results can only be gained by an undeviating conformity with every law of health.

In conclusion, I must not be understood to advocate an indiscriminate permission to unstable individuals to marry. Each point of moment must be considered carefully—the nature of the mental disorder, the family history on both sides, and, most important, the physical vitality of the person chiefly concerned. I have spoken to deprecate the dogma, "Once a lunatic, always a celibate."

Discussion

At the Annual Meeting of the Medico-Psychological Association, London, 1899.

Dr. Yellowlees.—I should be entirely false to my convictions if I did not say how emphatically I disagree with Dr. Mould's opinions in this matter. Nothing could be more dreadful than that we should advise insane people to marry and to run the risk of untold misery. Still more terrible is the risk for the children, and most extraordinary is the ground upon which that risk has been justified. The hope that the insanity may disappear in the course of generations, and the chance of insanity begetting genius, seem to me to be very poor and unjustifiable excuses. I cannot express too strongly my conviction that it is our duty, except in most exceptional and special circumstances, to advise against the marriage of persons who have been insane. Owing to the risks of an action for defamation, I have found it necessary to give advice to such persons in the most careful and guarded manner, and never by any chance to say, "I advise you not to marry," but to intimate in the most careful Scottish fashion, "If it were my daughter, I would not allow her to marry."

Dr. Jones.—I would ask Dr. Yellowlees whether he would advise not only the person who has had one acute attack of mania, but would also advise the children not to marry. Also whether he draws a line between cases of hereditary insanity and those due to traumatic causes, and insanity such as we have heard of this morning, viz. general paralysis and other forms due to syphilitic influence. Would

these come, according to Dr. Yellowlees, into the category of non-marriageable cases?

Dr. YELLOWLEES.—Every case must certainly be considered upon its own merits. General paralysis is, I am quite sure, one of the least hereditary forms of insanity. I do not think an attack of puerperal insanity in the mother is sufficient reason. It depends on the degree and directness of the inheritance, but I am quite sure that it is wise for us to err on the safe side. I think that the misery which is thus brought into families is something too dreadful to be faced. Whatever advice you give, however, people will generally act in accordance with their own intentions.

Dr. JONES.—I have lately had to advise as to the marriage of a private patient after an acute attack of insanity, and I had no hesitation in urging very strongly that they should have no children. This is not in agreement with the reader of the paper; but I see no reason why the happiness and comforts of a married couple should be marred through transmission of insanity to their issue in almost endless posterity.

Dr. MOULD.—I am afraid my paper must have conveyed a great deal more than I intended. Each case must be, of course, judged upon its merits, and one must advise in view of future probabilities.

A Note on Sulphonal, with a Case of Toxic Peripheral Neuritis following on its use.

By JOHN SUTCLIFFE, M.R.C.S., L.R.C.P., Assistant Medical Officer, Royal Manchester Hospital, Cheadle.

SULPHONAL has been extensively used in the Royal Manchester Hospital during the last two years. We have found the drug prepared by Bayer to be constant and trustworthy in action, converting noisy and turbulent patients into comparatively quiet and manageable cases.

It is usually given in doses of forty grains in hot milk at bedtime, and we have rarely found it necessary to increase this dose. After a short time sleep ensues and continues during the night; this is followed by a period of quietness, as a rule lasting until next evening. The cases in which it has been usually given have been of the chronic type—noisy, excited, and troublesome maniacs, and restless, agitated melancholiacs. We do not consider it advisable to give it in acute or curable cases. We have not noticed hæmato-porphyrinuria, irritation of the gastro-intestinal tract, eruptions of the skin, loss of appetite, or depressing effects on the heart, although we have seen other untoward results. Two gentlemen have taken forty grains daily,—one for twenty-five weeks and another for eight weeks. The following cases are of interest:

1. A gentleman in a state of great excitement of three months' duration—noisy, incoherent, and struggling with his attendants in an aimless fashion—had fifty grains on each of two successive days without apparent result. On the third day sixty grains were given, after which he slept almost continuously for three days, during which time he could be easily roused to take his food. He was thereafter much quieter and more manageable. During the next six weeks he had forty grains daily, and was able to be up and about without being troublesome. For the last sixteen months he has had no drugs, and has gradually sunk into a condition of quiet dementia. The course of his disease has progressed, unaffected by the treatment.

2. A gentleman suffering from acute melancholia after some months became subject to recurrent attacks of great excitement lasting about a month. Numerous sedatives had been administered, and the usual forty-grain dose of sulphonal had been given on many previous occasions without effect. From the 3rd to the 9th of January of this year, eighty grains of sulphonal were given each day, the result being that he was a little quieter and slept rather better. On the 10th he was in a drowsy condition, from which he could be easily roused, but he presented all the symptoms of well-marked peripheral neuritis. He complained of pain and pricking in the calves of his legs, which were painful to touch. He was unable to walk, he could not extend or supinate his hand, and his toes were pointed. The pupils acted slowly and the knee-jerks were absent. On the 20th January wasting of some of the muscles was observed, particularly those of the calves. The dynamometer registered nine kilos. in each hand. The symptoms have not yet entirely disappeared. His legs are still weak ; there is a slight patellar reflex of the left leg but none of the right. The dynamometer registers twenty-five kilos. in the right hand and twenty-two in the left. He has put on flesh and has had no further attack of excitement, although he has had no more sulphonal.

Discussion

At the Annual Meeting of the Medico-Psychological Association, London, 1899.

Dr. Conolly Norman.—This is a warning of another danger to those who use sulphonal. I believe I was the first asylum physician in the United Kingdom to use sulphonal in 1887, but I never ventured on a dose of forty grains to begin with or eighty grains to continue. Sulphonal seems to have many disadvantages, and

I would suggest that trional is much more suitable. The latter can be given in large or small doses; it is not liable to accumulate in the intestines, and will produce sleep at once or not at all.

Dr. Fletcher Beach.—I also have discarded sulphonal in favour of trional, the effects of which are less depressing, while the sleep is much more refreshing.

Dr. Jones.—I have seen very bad effects from sulphonal *post mortem* in patients who died from various bodily disorders, where I have on occasion found spicules like glass in the small intestine. It is also very apt to bring on a most intractable form of skin disease, especially at this time of the year, when, owing to the heat, the skin is apt to be congested. I have therefore ceased to prescribe it for the present.

Dr. Urquhart.—I have used sulphonal for years, and have only once seen bad effects. We lately admitted a young woman who had taken thirty grains on the prescription of a country doctor. She died of hæmatoporphyrinuria, and the supra-renal glands were found to be tuberculous. We could not obtain any information as to the maker of the sulphonal administered in this case. As soon as the symptoms occurred we telegraphed for supra-renal extract, but it arrived too late to be of use. I urge those who are unfortunate enough to meet with a case of this formidable malady to make further trial of supra-renal extract. No doubt the case referred to was extremely sensitive to sulphonal, but other cases have been recorded showing degenerative changes of the supra-renals. I can confirm Dr. Sutcliffe's remarks in regard to the value of sulphonal in chronic cases, and well remember one who was well known as a most difficult lady to deal with during her periods of recurrent mania. A short course of sulphonal was followed by a cessation of maniacal symptoms, and a mild melancholia supervened. She continued quiet and manageable for years, until her death. No doubt these powerful drugs require extreme caution in administration.

Concerning Irresponsibility in Criminals. By A. R. Whiteway.

The spiritualist was and still is the orthodox criminal jurisprudent. He believes in original sin, and when he sees a crime attributes its commission to the inherent wickedness of its author. The *médecin-légiste* looks first, not at the crime, but at its author, and brings an open mind to bear upon his inquiry into the reason for so strange a thing having been committed. The former, therefore, starts with the assumption that each offender is responsible, and excuses him only upon pressure, as in the clear case of the lunatic, the child, and the idiot, when the evidence of irresponsibility is overwhelming, even to his prejudiced eye. On the other hand, the horizon of the man of science is less bounded and grows wider year by year. He knows the moral disabilities of the general paralytic in the first stage, of the epileptic and of the true degenerate, and he is usually able to recognise their respective disorders. Magnan and Serieux tell us that between 1885 and 1890, seventy-six

general paralytics were transferred from prison to the Asylum of St. Anne within a very short time of their condemnation by criminal courts. Monod (*Conseil Supérieur de l'Assistance Publique*, fascicule 47) says that within the same period about 700 persons were sent to prison in France who were subsequently received into French asylums, and who were, in his opinion, undoubtedly irresponsible at the time of the commission of the offence for which they were severally condemned.

It is common knowledge that recently a general paralytic was received into an English asylum from a prison, with the marks of a flogging still fresh upon him. This is the true form of abuse which may exist, and not what Mr. Morrison and writers of his type call prison madness, which is almost always madness which existed in the prisoner when he was sent to prison, and was only noticed after he had been placed in confinement, and was consequently continually under observation. These things being so, there can be no question but that many prisoners have been wrongly convicted in Great Britain, as indeed is evidenced every day by the transference of prisoners to lunatic asylums, though this does not, unhappily, take place in the case of all lunatic prisoners. But where the real difficulty comes in is to ascertain the true mental condition of persons on the border-line,—those, in fact, who have a limited or intermittent responsibility; and to say definitely whether or not at a previous date they severally knew the nature and quality of the illegal acts they committed, and that in each case it was one prohibited by law, which is practically our English requirement. Art. 11 of the French code says in effect, that there can be no infraction of any law when the person accused thereof was in a state of madness at the time he committed it, or where he was constrained to do it by a power which he was unable to resist. For working purposes, then, the English and French criminal law stands upon the same basis as regards responsibility, though the results are dissimilar owing to the difference in procedure in the two countries. Those who know anything of the denizens of our prisons—especially of Parkhurst—are aware that, speaking generally, they are creatures inferior in every respect to normal citizens. Du Cane admits this for England, Corre in the case of the military prisons of France, Virgilio for Italian prisons, and Sichart for those of Würtemburg. When we find that prisoners,

as a class, are poor creatures, and that of these poor creatures a large proportion are recognised even with our inferior methods to have been clearly insane at the time of their crime, is it *a priori* improbable that many more were really irresponsible for the acts which got them into gaol, if only we could arrive at the *vrai vérité* concerning them? The great Dr. Féré scoffs at limited responsibility. "Le sujet est fou ou ne l'est pas" (*Dégénérescence*, p. 52). Is this so?

What Dr. Féré meant is probably that a man has either properly to stand his trial and to answer for an illegal act, or he has not. Of course, unless he is insane, an idiot, or a child, he has to answer for it; but one who is not insane, an idiot, or a child, may be able, during the process, to have shown concerning his commission of it extenuating circumstances, which should be weighed in an exact balance before the value of the illegal act is assessed. These will be greater or less according as the offender (if an occasional criminal) had more or less difficulty from his physical nature, temperament, and environment in resisting his impulses to offend generally, and especially upon the particular occasion under consideration.

The main objection that can fairly be taken to this view is the difficulty of its application. Anyone can judge of the noxious quality of an act, but few are capable of gauging the true "inwardness" and value of the conduct of the doer of it. If you merely punish the act itself, you don't measure the guilt of the offender; but if you can manage to measure his guilt and adjust the punishment to meet this, and not the act itself, or the disturbance estimated to be caused to the community by its commission, you do requite him according to his deserts—a thing to be primarily aimed at in punishment.

Even if fully persuaded that the expert should be able to furnish not only a favourable qualitative but also a quantitative analysis of the mental condition of the prisoner before he should be excused from the legal consequences of an illegal act, who can dare to say that a prison doctor can get into the mind of a prisoner (probably hostile to him), and affirm with certainty what was his condition at some previous date? That this can be done in gross cases, as in general paralysis, is obvious. But who nowadays believes that a young person of the age of 15 years and 364 days is rightly held to be irresponsible in France, while one who has completed his

sixteenth year, and is consequently but one day older than the other, has been suddenly and miraculously converted from an irresponsible into a responsible being? If this be true in regard of age, may it not be so also in certain mental states? To take an example: an epileptic, when not suffering from an attack of epilepsy, or sickening for it (if this expression may be allowed to a layman), or recovering from it, probably is meanwhile responsible for most of his doings. During the period that he is under the influence of his malady, he is not. The man ill in bed from whatever cause cannot run about, but before and after his illness he may be fully able so to do. Is this not so with the epileptic, and also with others suffering from spasmodic affections? Assuming that it is impossible to say whether an attack was or was not imminent when a prisoner committed a particular crime, but that without doubt he is a true epileptic, what more natural than to give him the benefit of the doubt, to effect a compromise, and to say that he is practically irresponsible? To go a step farther: what is now called degeneracy (*pace* Max Nordau) indubitably undermines the normal moral sense, though that it does so to such a degree as to excuse the offender from punishment is by no means always free from doubt. A typical instance of this is the case of Mary Ansell, who sent by post a cake containing phosphorus paste to an imbecile sister, whose life she had previously insured for £22 10*s*. This poor creature had two sisters insane or imbecile. Her grandmother is known to have been an epileptic, and all her mother's sisters died in asylums (*Daily Chronicle*, July 17th, 1899). Notwithstanding this terrible history, Dr. Nicolson and Dr. Brayn are supposed to have reported unfavourably upon the question of granting her remission of the death penalty.

In this instance, from the point of view of the writer, there should have been no hesitation on the part of the Home Secretary to at once overrule the sentence of the judge. There can be little doubt but that this poor girl did not realise that the destruction of her imbecile sister was inexcusable. The nature and quality of her act she did not properly evaluate. She wanted badly £22 10*s*., and got the idea that by sending phosphorus paste to her imbecile sister, if her sister ate it, she would get the money. This fact no doubt operated so strongly in the minds even of the learned alienists, and dominated every

other consideration, as to make them reason thus:—If this noxious being knew that by her evil act she would gain personal advantage, she was capable of knowing also that she ought not to do it at the expense of the life of her sister, even if imbecile and interned in an asylum. But may not this be merely begging the question? Because she knew the one, it does not follow that she knew the other, and the probability, we say, is that she did not, or else she would not have done what she did so openly, and for so small a personal gain. Her sense of proportion was upon the facts most imperfect, and her physical antecedents were very bad. She did, therefore, what might be reasonably expected that she might do under the circumstances if of imperfect capacity, and for this reason ought to have had the benefit of the doubt, and to have been sent to Broadmoor straight away.

Is it unlikely that this remarkable instance of heredity by sex should not have been clearly enough reported upon by the alienists, partly by reason of the official minds they brought to bear upon the case? In the absence of proper knowledge as to the value of such a history, probably what influenced the Home Office was the fixed idea that, because the girl could read and write, and understood that she would get the insurance money by the death of her sister, she could have restrained herself from committing an act of dastardly poisoning. But is it not common knowledge that the proportion of poisoners to educated persons is the same as that of murderers generally to the whole English population? (H. Spencer, *Sociology*, p. 363). Therefore her education would not act as a check to the perverted impulse which dragged her on, and so render her fully responsible. Nor is it merely a sufficiency of mental capacity or force of character that constitutes a man responsible. Delusions as of persecution, and obsession of various kinds, so overshadow their unfortunate victim that he is no longer a free agent, but acts under their baneful influences. Just as a weak man becomes the tool of a stronger one, so does the object of a delusion become the servant of such delusion, and in consequence incapable of standing upright. Whenever a man's mind is really off its balance—as it is temporarily when he is drunk, —surely in such a case he is at least as irresponsible as when thoroughly provoked. Yet violent provocation converts murder into manslaughter, while drunkenness does not. The recogni-

tion of extenuating circumstances again, which reduce the magnitude of a crime, and as a necessary result the amount of punishment, depends more upon the emotional nature of the jury, as is seen from the number of times they are allowed in the south of France, than upon the true circumstances of the crime. The last thing that is threshed out is the power of resistance to stress or pressure, which is one of the main factors in insanity. Dr. Mercier well shows (*Sanity and Insanity*, p. 140) that insanity is a function of two variables, heredity and stress, and yet we seldom give adequate weight to either. When they are found to be in conjunction, as in Mary Ansell's case, the conviction is overwhelming that she was not a fit subject for the extreme penalty of the law, by reason of her imperfect responsibility. Furthermore, many sexual offenders, such as the Whitechapel murderer and Vacher, were plainly irresponsible. They laboured under delusions which led them on in spite of themselves. The Lyons School of Criminology established this view in Vacher's case, and he escaped capital punishment for deeds which horrified the whole of the south-east of France.

And here, perhaps, a protest may not be wholly out of place against the idea that punishment prevents crime. It does so in the case of people who are in no degree off their balance, no doubt. Such persons generally do not steal, and a large proportion of them would do so if they did not believe that the result of so doing would be that they would have to go to gaol. But who can seriously suggest that, if a man is starving, he won't steal food? or that education or any appeal to reason will overcome violent passion of any kind? An appeal to the emotions may be effective, because the cause of most incidents of conduct is a feeling, and not a cognition. Therefore to punish a man *pour décourager les autres* is useless in serious cases like murder, and what bears this out is, that all ameliorations of criminal codes have been as yet consistent with, if not the cause of, the further lessening and repression of crime.

If the first and foremost question with reference to punishment is the quantity of responsibility a given criminal possesses, to solve this a quantitative analysis of his mental and moral state must be made, in order to determine his measure of responsibility. And this would seem to be so, whichever of the more liberal doctrines as to responsibility now prevalent we may individually be pleased to adopt. These divide them-

selves for practical purposes into two main groups, consisting of the views of the spiritualists and the so-called positivists. The former believe in abstract moral obligation, the latter only in a responsibility to society. The positivist theory is held by different sections in somewhat different ways, which amount in fact to this:—One school reduces responsibility merely to the necessities of our social relations, whether or not they are held to arise from social contract, in which case it expressly denies the power of free will (Fouillés); while another considers the right to punish to depend upon what is required for the defence of society. A third section excuses the madman, on the ground that he is not a unit identical with other units of society. Von Liszt, again, holds in so many words that the basis of responsibility is the power to act normally, irrespective of the exercise of free will. Others, again, make a distinction between subjective and objective responsibility, saying that we know nothing certain of the first, but that the second certainly depends upon the danger the example of the offender causes to society (Levy Bruhl).

Whether or not we believe with Schopenhauer that Kant's imperative category is a "vieux reste du Décalogue," no one can, we think, feel himself to be responsible unless he be conscious of his own personality. This he may well be without having a keen sense of abstract obligation, or without having free will. If he be fully conscious of the "identity and permanence of his own existence," or, in other words, of his own personality, he is capable of comprehending that of others, and he is, in fact, a normal being, to whom an infraction of the law may be imputed as a fault, for which he is culpable. Putting this in another way, he deserves punishment to such an extent only as he is or is not a normal being, regarded both from a physical and psychological standpoint. If we have the reasonable man trotted out, as the only being with whom we have to deal when the measure of damage in a civil action has to be assessed, we can regard no one but him again when the action is that of Regina *versus* somebody, and where the penalty has to be fixed, that is in a criminal case. If this be the true view, Mary Ansell ought never to have suffered the extreme penalty of the law, or many other poor creatures who have been done to death by reason of our officials' and judges' ignorance of psychology.

Why men of science find it so hard to believe in partial responsibility, is often because they do not appear to observe that imputability does not depend upon actual discernment of right and wrong, so much as upon the presence or absence in the offender of the qualities necessary to acquire and maintain such power of discernment. These qualities exist more or less in the various members of a family of degenerates, the personality of each being attenuated, perhaps in different degrees. Being alike of unstable equilibrium, all are especially liable to impulsions of passion of any kind. One often sees children, long before they can know the nature of vice and crime, indulging in horrible crime from an instinctive faculty and a preference to evil that must be outside themselves (Mendel). Who can dare to say that to such unhappy beings, when adolescent, responsibility for the full measure of damage done by their evil deeds (if any) ought justly to be imputed?

The culpability of individuals, therefore, varies indefinitely from the maximum to the minimum, and in the words of the Bible, "Unto whomsoever much is given, of him shall be much required."

Clinical Notes and Cases.

Emphysema of the Subcutaneous Areolar Tissue occurring in a Case of Acute Mania. (1) By CONOLLY NORMAN.

THE subject of this observation was a young woman who was admitted to the Richmond Asylum, Dublin, on September 16th, 1898. Hereditary history not very full nor trustworthy. Father died many years ago of phthisis. Mother, who is a person of somewhat eccentric manners, stated that X— (our patient) had always been wayward, not bright and not easy to manage. On the other hand, X—, when she recovered, said that her mother was flighty and neglected her, preferring the other children. Brothers and sisters healthy. Patient did not "get on" at home. A few weeks before admission, she was

sent out as a nursery governess. Does not seem to have been kindly treated in her situation : had a troublesome menstruation ; became sleepless, excited, and incoherent. Actual oncome of insanity is dated a fortnight before admission.

On admission.—Fine healthy-looking girl, well nourished, but not fat. Stated to be sixteen years old. She looked rather childish for that age, and the mammæ were less developed than normal. She was a little bruised about the arms, and scratched about the wrists; otherwise there was nothing to suggest injury. No fractures were detected. The lungs seemed normal. The heart presented a slight irregularity of rate, probably merely nervous. She was in a state of acute maniacal excitement. She resisted violently, and required to be held by three nurses while her chest was being examined. She uttered piercing screams every now and then. She kept constantly reiterating the declaration, "I do not want to be a Jew." She was placed in the female infirmary. She became very noisy and violent, flinging herself about, and struggling frantically with the nurses who endeavoured to restrain her. Towards midnight she was removed to a single room, where she spent that night (September 16th to 17th) without sleep.

September 17th.—Kept in seclusion. She managed to wrench open the locked window-shutter in two single rooms successively. It is also reported that having climbed on the internal window-sill, she flung herself down, but she was probably not hurt as she fell upon a nurse. She was placed in another room, the floor of which was covered with mattresses, and she was held down in her bed on the floor by a couple of nurses until a new and secure shutter was fixed in another apartment. Reporter saw her while being so held. She endeavoured to get up, was intensely restless, indulging in ear-piercing yells and unmeaning shouts. Her language consisted largely of mere repetition of people's names and of short phrases, of which the commonest was "I will not be a Jew." She had hyoscine $\frac{1}{100}$ grain in the morning, and morphia $\frac{1}{4}$ grain in the evening, both subcutaneously. No effect was perceptible from either in producing quiet or sleep.

September 18th.—Restless night. Incessantly noisy to-day. Has scarcely taken any food since admission. Lips becoming sordid, and breath rather foul. Temperature in axilla 97·6° morning, 98° evening. Had bromidia 1 drachm morning and evening. Spent all day in a single room. Fed with nasal tube three times—morning, midday, and evening. The last administration of food at 7 p.m.

September 19th.—Patient was reported restless and noisy all night. At about 9.30 a.m. found to be suffering from extensive emphysema of the integuments of neck and chest. When seen by me a little later she was restless and noisy, shouting incessantly in her monotonous and unmeaning way. She was resistive, violently struggling against any examination. Nevertheless after protracted efforts I was able to go all over the chest. I could detect no irregularity of surface of clavicles, sternum, or ribs, nor could I discover bony crepitus on palpation. Neither bony crepitus, nor lung crepitus, nor friction-sound was audible with the stethoscope. The conditions of resonance on percussion were not easily to be determined, owing to the degree of emphysema. The distribution of the emphysema was as follows:—Sides and back of neck, leaving a triangular region from the angle of the jaw on each side to the top of the sternum free; entire front and back of thorax, most marked on right side; right hypochondrium almost as far down as the level of the umbilicus; shoulders and arms down to the elbow, most marked on right side; the skin over the not fully developed mammæ was much distended, presenting an irregularly lumpy appearance; emphysematous crepitation was most distinct in the subclavicular regions. Temp. 98·4° at 9 a.m., 100° at 1 p.m., 99·4° at 8 p.m. Had morphia $\frac{1}{4}$ grain hypodermically at 11.30 a.m., and the same at 4.30 p.m., and the same at 9 p.m. During this day she took no food. The bowels did not act. Croton oil was dropped on the tongue. She was continuously restless and noisy, shouting short unmeaning sentences over and over.

September 20th.—Slept interruptedly about four and a half hours. Restless, noisy, and resistive. She shouts inarticulate cries in a perfectly unmeaning way, and keeps repeating people's names for hours at a time, or short sentences in

the same manner. Pulse of fair strength, 96. Skin cool and moist. Took voluntarily a pint of milk and an apple. Emphysema, neck, chest, right hypochondrium as yesterday. The difference between left and right sides is more noticeable than yesterday, and the emphysema can scarcely be felt down left arm. Had morphia hypodermically ¼ grain at 9.30 a.m., with $\frac{1}{100}$ grain digitalin, and morphia ⅛ grain in same combination at 1.45 p.m. This day there was a surgical consultation with a view to ascertaining (1) whether there was a broken rib; (2) what was the origin of the emphysema. Our visiting and consulting surgeon, Dr. W. J. Martin, and an eminent hospital surgeon in the city, conferred with the resident medical staff. No injury was discovered, and no definite diagnosis was come to as to the probable origin of the emphysematous state. Temp. 97° morning, 98·4° evening.

September 21st.—No cough; no difficulty of breathing; no difficulty of swallowing. Respirations 16 to 18 per minute. Left to herself she was somewhat more tranquil, but resists and shouts when one approaches her. She refuses food, grapes, milk, &c., but takes a little if the things are left near her. Impossible to make any satisfactory examination owing to her resistance, but the emphysema seems less on the left side, and cannot be felt on the left arm. On the other hand, it has extended down the right forearm to the wrist, and it is still very marked in the lateral regions of the neck and all over right side of thorax. The crepitation is most coarse under the right clavicle. There is on each forearm a patch of erythema, with tenderness at the site of hypodermic syringe punctures. Morning temp., 99·4°; evening, 100°. Enema.

Dr. W. H. Haughton, who is an experienced radiographer, assisted Drs. Rambaut, Fleury, and the reporter in examining the chest with the Röntgen rays. In accordance with our experience as elsewhere recorded, the examination was a little unsatisfactory. One of the observers thought he detected some slight thickening of the second right rib about three inches from the sternum; another could not perceive the phenomenon referred to; the others, while noticing the darkening of the anterior image, thought it was due to the shadow of a posterior image crossing the former, and did not represent any real change in the rib. The patient was tolerably tranquil during the examination with the fluorescent screen.

September 22nd.—Pretty quiet when left alone; occasional shouting fits. Resistive and noisy when under examination. Taking plenty of milk, tea and toast, grapes, &c., when the things are left with her. Resists too active attempts to feed her. The emphysema seems to be limiting itself on right side. It can no longer be felt in the hypochondrium. On the other hand, crepitus is very coarse in the right subclavicular space, where, with careful manipulation and a little attention, it can be heard with the unaided ear—faintly indeed, but distinctly. Considerable inflammation round hypodermic punctures in both forearms. Enema. Sulphide of calcium ½ grain every two hours. Slept a good deal during day. Morning temp. 99·8°; evening 99°.

September 23rd.—Fair night; more tranquil. Pulse 88, respirations 16. Sleeps (as yesterday) indifferently on back or on either side. It was impossible to make a thorough examination of her chest, but in the subclavicular and lateral regions resonance was normal, and vesicular breathing could generally be made out distinctly. She holds her breath while one is examining, which increases difficulty. Emphysema cannot be made out to-day in either arm. It is less everywhere; hardly perceptible on left side of chest, except just under clavicle. No cough. Morning temp. 98·6°; evening 98°.

September 24th.—Morning temp. 100°; evening 99·8°. Lungs appear normal and heart strong. Considerable inflammation of right forearm. Some inflammation of left forearm also, but not so severe. After surgical consultation right forearm incised in four places. Free discharge of pus, *bonum et laudabile*. Patient bore incisions well.

September 25th.—Emphysema generally less; most marked under right clavicle; also well marked in neck. There is a slight difference in percussion note in the subclavicular spaces. This is probably due to the different degrees of surgical emphysema. No crepitus or friction heard. I was able again to feel the second right rib very distinctly, and could make out no irregularity. Respirations fourteen to sixteen per minute, and she retains the power which one has observed previously of holding her breath for quite long periods. Her voice yesterday seemed

hoarse and whispering; loud but hoarse and cracked to-day. Morning temp. 99°; evening 100·2°.

September 26th.—Temp. 100·4° to 98·4°. Noisy in the night, but slept five hours. Takes nourishment well. Tongue moist. Bowels free. Respiration easy. Breath-sounds normal in front and behind. On the left forearm there is localised inflammation in two places—round punctures of hypodermic needle.

September 27th.—Emphysema continues to diminish in extent. It is now to be felt in the neck, chiefly at the root and near the middle line: on the left side of thorax, only far out in the infra-clavicular space; on the right side of thorax as low down in front as the upper margin of the mamma, as low down laterally as the lower margin of the mamma, not behind at all. The emphysema beneath right clavicle is distinctly coarser, and can with care be heard to crepitate on pressure. As yesterday morning, but rather more distinctly to-day, the percussion note is raised over right apex. No abnormality could be detected with stethoscope in breath- or voice-sounds. Free from cough. Respirations 17. Morning temp. 99°; evening 98·4°.

September 28th.—Respirations 18 to 20; pulse 80. Decubitus semi-dorsal, semi-dextral. Reported generally to lie on back or right side; no cough. Asked for food yesterday, and complained of being hungry; made a good breakfast (egg, &c.). Tongue (at first dry and sordid, then white and dry, then cleaner but dry) is becoming more moist. Emphysema less extensive, only noted at root of neck and in both infra-clavicular spaces; less coarse, yet still audibly crepitating in right sub-clavicular space. The right apex distinctly less resonant than left and the vesicular murmur fainter; no bronchial breathing, crepitus, or friction detected. Temp. 98·4°.

September 28th.—Some impairment of percussion note at right apex and weakening of breath-sounds. When she draws a deep breath the respiratory murmur is good and clear, and there are no adventitious sounds except the superficial crackling of the emphysema. The inflammation of the left arm seems to be receding.

September 29th.—The impairment of resonance and diminution of vesicular murmur over left apex are rather less marked to-day. The emphysema is much less. There is no tenderness to be made out anywhere over the chest, and the patient is now quite capable of saying if she were hurt, though probably incapable of concealing wincing.

September 30th.—Temp. 98·6°—99·6°. Heart normal. Still some impairment of percussion note at right apex. Breath-sounds are rather weak, but she can draw a deep inspiration when required. Sounds are then normal, and quite free from anything adventitious. Emphysema very slight. Tongue furred. Appetite good. A small boil on left buttock, a little papule near anus, and another on abdomen, probably part of a general eruptive tendency.

October 1st.—Urine acid, 1016; no sugar, no albumen. Restless night, crying and frightened. Temp. 99·8°. There is some weakening of the respiratory murmur over right anterior apex, but I think the difference in percussion note has disappeared. On deep inspiration breath-sounds good and clear. Emphysema has nearly disappeared. Heart acts well, except for a little variation in rate. Small abscess on left arm opened. Acneiform eruption on chest.

October 2nd.—Temp. 99·8°. Copious eruption of sudamina over front of chest. I cannot be sure of emphysema under right clavicle (elsewhere it is absent). Difference of resonance less noticeable. Vesicular murmur over right side less distinct than over left. Second small abscess on left forearm opened to-day. There is a deep hard swelling over middle of right radius (? periosteal). (This subsided without giving further trouble.)

October 3rd.—Temp. 100°—98·8°. Cannot make out any difference in note between apices, but there is still weakened breathing on the right apex. No adventitious sounds anywhere. Fairly tranquil, and taking nourishment well. Emphysema can no longer be detected. The ribs can be pretty distinctly made out everywhere, and no irregularity, thickening, or crepitus can be found. The feebleness of the respiratory murmur is confined to right apex, elsewhere the breath-sounds are in every way normal. No difference of resonance noticeable to-day.

October 13th.—For the last ten days gradual mental improvement. Tem-

perature varying from normal to a point or two over 99°; now normal. Patient is talkative and incoherent, but not restless.

October 18th.—Temperature has been subnormal for two days. On physical examination of chest the amount of expansion on inspiration of both apices seems equal and normal. Tactile and vocal fremitus well marked, and about equal on both sides (perhaps slightly less on the right). Percussion note just appreciably higher on gentle percussion over right apex. Breath-sounds normal; no adventitious sounds. Vesicular murmur may be slightly less marked over the right apex. Vocal resonance normal, and the same on each side.

October 23rd.—I cannot detect any difference in percussion note over the apices. The respiratory murmur is not quite so loud over right, but the difference is trifling, and but for the history I would incline to say the abnormality was over the left. No adventitious sounds anywhere. Her mental state prevented a full examination, as she would not speak, nor cough, &c. I was able, though she resisted, to examine very fully each rib by palpation. I could detect no trace of irregularity or thickening anywhere.

October 27th.—I think the percussion note over the right apex is slightly higher pitched than on the other side, and over the same area vocal resonance increased, but respiratory murmur diminished.

November 3rd.—This patient has been up and sitting in the ward during the last week. The physical signs in the chest are unchanged. Mentally she seems to be less confused, and is tranquil.

November 16th.—Patient is less confused, but she does not yet recognise or is interested in her surroundings. She is up every day.

December 22nd.—Patient's mental condition is very much improved, but she does not yet seem to recognise her position. She knows who I am, and can tell the name of her attendants. She spends most of her time reading, or at needle-work, or in similar occupation.

January 16th, 1899.—Physically healthy, but there is still slight dulness and diminished breath-sounds over the apex of the right lung, but no adventitious sounds. No thickening of a rib as after an old fracture is noticeable. The improvement in her mental condition is very well marked. She recognises her surroundings, and now knows the names of the other patients, &c. She still has a childish and somewhat incoherent manner, and when questioned laughs in a silly way.

It is unnecessary to dwell on the further progress of the case. The patient was examined with the fluorescent screen again, and the thorax was photographed with the Röntgen rays, but no trace of damage to bone could be discovered. She became very fat, and developed remarkably as to physical outlines. She resumed what apparently was her normal condition—one of tranquillity without very high intelligence—[and was discharged "recovered" May 10th, 1899]. She remembered in the beginning of her illness imagining that she was about to be married to a Jew, which was a repellent notion. She remained throughout remarkably free from any of those indications of gross sexual excitement so common in girls suffering from acute mania. Menstruation while she was in the asylum was irregular and scanty. Its occurrence or non-occurrence did not seem to influence her mental state.

The notes from which the above account has been abbreviated were written in part by the present reporter, in part by his colleagues, Dr. Eleonora L. Fleury and Dr. Gordon W. Holmes, to whom he must express his warm thanks for their very careful watching of this interesting case.

A case of much interest in itself and in its relation to the case just recounted is recorded by Kellner, of Hubertusburg, in vol. xxv of the *Archiv f. Psychiatrie*. The author states that he has found no similar case in the psychiatric literature of the preceding twenty years. Kellner's patient was a woman of thirty-four years of age, who had been a prostitute, who suffered from general paralysis, and who, on

her admission to the asylum in February, 1892, exhibited diminished percussion resonance over both apices, the note being higher on right than left side; fine dry crepitus over both apices, especially the right, and prolonged and somewhat blowing expiratory sound over right apex. No pleural rub. No cough nor expectoration. She was maniacally excited, mistook persons, and showed marked sexual excitement. She was liable to outbursts of noisiness, during which she shouted repeatedly short words or sentences ("criminal," "policeman," and the like), at the same time striking herself violently on the head and chest. In December, 1892, excitement increasing, patient became very violent to those about her, and stood for hours by the wall beating her head with her hands or stamping constantly, and continually shouting, "I swear upon my honour." Some rest and sleep were procured by wet-packing and strong doses of duboisin subcutaneously. She continued to cry, "I swear upon my honour," and kept time to her cries with blows upon her chest. Then she took to wringing and rubbing her hands till she produced blisters and raws. She tore all dressing off these. At length (December 24th) the straitjacket was applied, 0·001 of duboisin being given subcutaneously. After a short period of slight dulness she went on shrieking till morning. At 5 a.m. on December 25th, when she was undressed (probably this means when the jacket was removed, the length of time that it was worn not being specified) and washed, nothing was noticed unusual. Between 7 and 8 o'clock a.m. a slight swelling was first observed in the upper part of the back and the lower part of the neck on the right side. The patient kept on screaming, "I swear upon my honour." The swelling rapidly extended over the neck, face, and entire upper part of body. By 10 o'clock the emphysematous swelling had spread over the trunk and abdomen. Posteriorly it extended to the upper margins of the glutei, the back resembling two inflated air-cushions. The head was thrown back, the shoulders raised. The neck looked like a gigantic goitre, particularly under the chin, and measured 52 cm. in circumference. The region over the clavicles was so swollen that one could not feel these bones without pressing down to a depth of 2 cm. The swollen eyelids completely closed the eyes. The abdomen was deeply marked by the linea alba. The shoulders and arms were engaged in the swelling. The breasts, formerly flaccid, were much swollen. The circumference of the chest beneath the nipples was 92 cm. The skin was neither specially pale nor red. Clear bluish veins were abundant on arms and chest. To the touch marked crepitation was present everywhere. Small clusters of swellings up to the size of a pea appeared under the skin, which vanished on pressure, and reappeared again when pressure was removed. On the front of chest, and there only, the impress of the finger remained for some time (œdema). The bridge of the nose, the integuments immediately surrounding the mouth, the forehead, the scalp, and the ears were free from swelling, and remained so. The swelling was everywhere more marked on the right side than on the left. The voice was low and hoarse. No difficulty of swallowing. Urine retained, necessitating catheterisation. Towards evening the emphysema had spread to forearms, fingers, and thighs as far as knees. Wet packs. Morphia subcutaneously.

On December 26th, *retentio urinæ* from swelling of urethral mucous membrane, which crepitated on pressure. The voice was hoarse. There was frequently difficulty in swallowing liquids.

December 27th.—Calmer after injection of duboisin. After three hours in a wet pack the temperature, which had hitherto been normal or subnormal, rose to 102·2° F., but went down quickly to normal when the pack was removed.

On December 28th the swelling of face had decreased, and patient could open her eyes. On the other hand, it was more distinct in the peripheral parts of the extremities, where crepitation could be felt clearly. The soles and palms and the dorsa of feet and hands, as well as the gluteal region and the parts already named, were never attacked.

On December 31st it was noted that the generally decreasing emphysema had pretty quickly increased again after some hours of excitement, and the author observed that such a temporary augmentation had occurred several times.

In the early days of January the swelling steadily and rapidly declined. On January 1st a close examination by palpation of the thorax was possible. No trace of irregularity or other indication of fracture of ribs or collar-bones could be found, and there were no tender spots.

On the 9th there was a paralytic seizure, with subsequent elevation of tempera-

ture (42° C.). Emphysema was only present in the peripheral parts of the extremities and in a few spots on the anterior surface of the chest.

On January 12th emphysema had entirely disappeared. The general physical condition had returned to the *status quo ante*. The circumference of the chest was 72 cm., of the neck 32 cm. The exploration of the lungs showed no particular change from the antecedent condition.

Dr. Kellner's case is illustrated by a couple of photographs showing the emphysematous condition and the subsequent state. Dr. Kellner was so kind as to say further, in reply to my inquiries, that the patient has since the date of his paper been sent to the chronic asylum of her district, where he finds she is still alive, so that there has been no opportunity for ascertaining anything further as to the condition of her chest than the clinical history tells.

Dr. Kellner epitomises his case by saying that it is the case of a paralytic patient who suffered from a rather old phthisical lung trouble, and who, after repeated and excessive shouting, was suddenly attacked with extreme superficial emphysema.

The emphysema was much more general in his case than in mine. Otherwise there is a very remarkable resemblance between the two. Both patients were very violent, and knocked themselves about in a very reckless way. Both were subjected to a certain amount of restraint—his to direct mechanical restraint (jacket), mine to the restraint of nurses holding her. If there was greater risk of injury through the violence of others in my case (though I have no reason to believe that such occurred), there was in his case more probability of injury in the mode which he suggests, namely, by violent straining on the patient's part. Both patients shouted beyond the ordinary degree of noisy maniacs, and both tended to shout in the same particular way—by the monotonous and incessant repetition of the same short sentences. Both, I believe, had old apical lung mischief. This was clearly ascertained in Dr. Kellner's case. In our case I think it is probable that the slight difference between the physical signs over the apices existed from the beginning, though we overlooked it at first, as is so very easy to do in such cases. The involvement of the right apex was but slight, as will be evident from the notes. I have been careful to let this be seen by quoting the notes of various observers, showing such slight differences in descriptions given by different observers, or of the same observer at different times, as occur in cases where the signs are not very well marked. It is probable

that there was some degree of impairment of perfect action of the lung through old catarrh, accompanied by pleural adhesions.

In the Hubertusburg case the chances of fracture of the ribs (the commonest cause of surgical emphysema) appear to have been dismissed early and entirely. On the other hand, I thought of fracture first and constantly, and only dismissed the notion from sheer lack of evidence. It is hardly possible to suppose that so extensive an injury as would have resulted from a fractured rib wounding the lung could have occurred not only without distinct physical signs (often enough obscure), but without any symptoms whatever. The rise of temperature which occurred soon after the appearance of the emphysema was clearly due to the suppurations which unfortunately followed hypodermic injections.

Both patients, by the way, had been subjected to subcutaneous injection, but I do not attribute any importance to this fact; for though I have known the careless use of the syringe followed by not quite inconsiderable local emphysema, that general emphysema should follow it is of course impossible.

My case differed from that of Dr. Kellner in one particular: artificial feeding had not been used with his patient. In our case the patient had been fed three times with the nasal tube the day before that on which the condition of emphysema became evident. The possibility of some injury about the throat can perhaps not be wholly excluded. The tube used, however, was a soft rubber one. Injuries about the throat produce emphysema sometimes in a way which is not very intelligible. Some time ago a patient of mine, in a fit of melancholic frenzy, thrust down his throat the leg of a chair which he had broken off. Presumably he did not injure his larynx or trachea, for he had neither loss of voice nor any other troublesome symptom afterwards except emphysema of the neck and trunk. He made a good recovery bodily and mentally. Of course the chances of injury with a soft nasal tube must be small, and emphysema is not one of the recognised risks of artificial feeding.

Kellner observes that there was in his patient probably a predisposition, as it were. The woman had been fat, and had then become thin, and so there was not the normal resistance in the subcutaneous tissue. This condition did not exist in

my case, but the extension of the emphysema was by no means so great. That there is something either in the condition of the lung tissue, or in the condition both of the lung tissue and the superficial tissues, which produces a "liability" to subcutaneous emphysema, seems probable from Belli and Rebaudi's case referred to by Kellner, in which a typhoid fever patient developed general emphysema without injury or strain.

Emphysema resulting from straining is well enough known, occurring in parturient women, in children after prolonged screaming, &c.

Can the "cause" of the emphysema in these asylum cases have been the mere excessive strain resulting from continuous shouting? In both patients an element in accentuating strain may have been found in the fact that the women kept repeating the same short sentences over and over for hours. In one the use of the jacket, the other the fact of being held by nurses, may have given the resistance required to fully develop the condition of strain. In both probably there was a diminished elasticity of a portion of the lung, which may have further contributed to the occurrence of rupture under strain.

All these conditions, even in combinations such as occurred in Dr. Kellner's case and mine, are common enough to render it strange that more such cases have not been recorded if our interpretation of the phenomena be correct.

Dr. Samuel West, writing of pneumothorax, says: "The question is raised whether it is possible to rupture the healthy lung by any force which respiration can bring to bear upon it. To this question an affirmative answer must be given. The violent paroxysms of whooping-cough and the straining of parturition afford clinical evidence that the lung may be ruptured by expiratory efforts. The condition, however, which is commonly produced is not that of pneumothorax, but that of subcutaneous emphysema. A careful experimental study of this subject has been made by Dr. Champneys upon the lungs of infants. When the lung is over-distended and gives way, the air first makes its way beneath the pulmonary pleura, stripping it easily off for some distance from the surface of the lung. It then passes along the root of the lung to the mediastinum, and following thence the course of the cervical fascia, it reaches the subcutaneous tissue of the neck, whence it may spread over the whole body.

If the pleura gives way, the place of rupture is to be found usually near the root of the lung; but although pneumothorax did now and then arise in this way, the usual result was that already described—namely, emphysema of the mediastinal tissue and of the neck. Sometimes by artificial respiration after tracheotomy the air has taken the reverse direction, and, tracking downwards from the tracheotomy incision along the deep cervical tissue, has reached the mediastinum or even the subpleural tissue, and occasionally the pleura has been ruptured and pneumothorax produced." (2)

(1) Read at meeting of Irish Division, April 1st, 1899. (2) Bradshawe Lecture on 'Pneumothorax,' *Lancet*, August 20th, 1887. I am obliged to my friend and colleague, Dr. Holmes, for this reference.

A Case of Rapid Ante-mortem and Post-mortem Decomposition. By E. B. WHITCOMBE, M.R.C.S., Birmingham.

THE patient, thirty-nine years of age, was admitted into Birmingham Asylum in February, 1898. He was a porter, married, in fairly robust condition, and was a typical example, both mentally and physically, of general paralysis of the insane of somewhat short duration. He was stated to have been steady, of temperate habits, and had been in the army. For twelve years he served in India. No history of fevers or other illness. The disease progressed without any special features until January 14th of this year, when he was noticed to be worse; his breathing was a little rapid, and in consequence he was sent to the infirmary ward and was examined thoroughly by the assistant medical officer, who found nothing specially interesting, but ordered him to be put to bed and kept warm. This was about 3 o'clock in the afternoon. At 7 o'clock the same evening I was asked to see the patient (he had been examined at 5 o'clock by the nurse). I found the left leg from thigh to toe was double the size of the other leg, and nearly the whole surface of the leg was perfectly black, and there were numerous large bullæ the size of one's fist in different places along the leg. There was no special line of demarcation. At first sight it looked like an extreme case of local purpura, but after a careful examination I came to the conclusion that putrefaction had actually set in, and that the man was dying,

and death took place an hour after I saw him. The most extraordinary part of this case occurred afterwards. I am accustomed to go and see a body before giving my certificate to the coroner. I saw this man between 10 and 11 on Sunday morning, he having died at 8 p.m. on Saturday. The body was double the former size; it was more like the body of a negro, the whole surface being in a black condition, and the bullæ had increased on the other parts of the body. The scrotum was distended to the size of a man's head, and the penis swelled and distorted. The case was the more extraordinary as the highest temperature recorded locally at the time was 52·8°, and the lowest 34°. I personally saw the coroner, and together we went through numerous works on jurisprudence, but we could find nothing to give us any idea as to the cause of this condition, and he very kindly and in scientific interests ordered an inquest. He sent Dr. Simon, Professor of Medical Jurisprudence in Mason College, to make the post-mortem examination. The results were practically *nil*, the whole body internally and externally being putrefied. The cause of death was very naturally put down to general paralysis, but as to any cause for this extremely rapid putrefaction we could arrive at no conclusion. The case is one of very great interest. I believe that the first idea that the nurse had in the infirmary was that this man must have been injured. Now there was the usual considerable difference between the appearance of an injury and this condition, which looked like purpura; but besides this the difficulty that occurred to my mind was as to the fixing of the time of death. Here was a body presenting the appearances which are usually recognised as those of three or four weeks' duration, and these had happened certainly within sixteen hours. From the point of view of jurisprudence it occurred to me that a murder might be committed, that the body might present these appearances, and that it would be a most serious matter for a medical man to give an opinion as to the time of death. We know that in hot countries this condition does occur, but we were in the middle of winter, and the condition arose from, so far as we could judge, no special cause whatever. There was some atheroma of the arteries, but otherwise we could distinguish nothing of importance at the post-mortem. It is to be regretted that no bacteriological examination was made.

Discussion

At the Annual Meeting of the Medico-Psychological Association, London, 1899.

Dr. Elkins briefly described the case of a patient who was a very stout woman, and who suffered from hemiplegia before she became unconscious, with a very flushed face. She died in the forenoon of July 20th, in hot weather; and when the friends called next day the face was so black that they insisted upon an inquest.

A Member referred to a case in the infirmary at Wigan about three years ago. The patient had his feet terribly mangled, necessitating amputation. He died the same evening with intense pain and swelling from the amputated limb up to the abdomen. After death the swelling continued to such a degree that it was considered necessary to make a bacteriological examination of the serum and the blood. The result was negative.

Dr. McDowall recalled a case of very rapid putrefaction of the lower part of the body, due to thrombosis of the inferior vena cava. The swelling and discoloration of the lower half of the body was very remarkable, and death occurred in an exceedingly short time.

Dr. Mickle did not think that light could be thrown on the case, as there was not an expert bacteriological examination. One might suppose that there had been a dissolution of blood generally, along with the action of the bacilli which are concerned in putrefaction which leads to the emphysema, which is sometimes found in bodies in a short time. These might act with rapidity in the cold weather, as they notoriously do in hot climates.

Dr. Blandford.—In the first volume of our Journal Dr. Bucknill recorded certain cases of discoloration resembling bruises, and I recollect bringing forward at the Cambridge meeting of the British Medical Association a case in which the whole of the back became discoloured before death. There was no question about any injury. I think it is worth while again to mention this, because such discolorations may occur, may be mistaken for bruises, and attendants may be wrongly blamed.

The President.—When I first heard of this case I looked upon thrombosis as the cause; but, from what Dr. Mickle has said, probably there were other causes operating. The difficulties surrounding the attempt to discover an origin for the discoloration brings to my mind very forcibly how useful it would be to have an expert associated with our asylums in the Midlands to whom we could entrust a bacteriological examination. Dr. Blandford was speaking about discolorations of the skin. It is not uncommon to see patients marked in that spotty fashion, but it does not usually amount to anything like the same discoloration as Dr. Whitcombe has described.

Dr. Whitcombe.—In reply to Dr. Seymour Tuke I would say that the patient was progressing towards the last stage of general paralysis, though still able to get about; and in reply to Dr. Mercier I would repeat that thorough examination revealed no discoloration and no injury, although twice examined by the assistant medical officer. I agree with Dr. Blandford that certain discolorations, somewhat common in asylums, are not due to injury. A very great distinction is to be drawn between those conditions which are purpuric and those which are the results of ordinary bruising. I think that in years gone by a good many unfounded accusations have been made in consequence of the difference not being recognised.

Occasional Notes.

The Annual Meeting of the Medico-Psychological Association.

THE Fifty-eighth Annual Meeting, held in London under the presidency of Dr. Beveridge Spence, gave ample evidence of the increasing importance of the Association not only in regard to administrative concerns, which have always been handled with the practical skill of Britons, but also in regard to scientific work which year by year advances our knowledge and extends the domain of mental medicine.

It was confidently expected that Dr. Beveridge Spence would address the meeting with words of wise moderation and characteristic good sense. His life-work has been to place Burntwood Asylum in the forefront of institutions devoted to the care and treatment of the insane. That widely recognised and well-merited position has not been attained without years of right thinking and high endeavour; and the reflection of his character and purpose shines through the sober eloquence of his presidential address.

Founding on the latest results of scientific investigations Dr. Beveridge Spence proceeded to develop arguments for the better accommodation of the insane suffering from phthisis, and made the suggestion that a Committee should be formed to indicate the position of the Association in reference to this important question. We trust that this will not be lost sight of in the numerous details of our present activities.

The Association has now received the Prize Essay on "Phthisis in Asylums," by Dr. F. G. Crookshank, and his admirable presentation of the facts and arguments imperatively demanding our attention forcibly emphasises the Presidential proposition. We bear in mind that the Association approved of the method of collective investigation by a committee of its members, and it would lead to well-considered action were that committee to gather and tabulate the information which is now lying hidden in asylum case-books and the uncommunicated experience of asylum physicians. Our department of medicine could not be better represented on the Committee of the

National Association for the Prevention of Tuberculosis, which is honoured by the presidency of the Prince of Wales. Sir James Crichton-Browne has for years pressed this subject upon the public attention with all his ability and all his eloquence. It is for us to strengthen his position by the careful presentation of our reasoned opinions.

Naturally Dr. Beveridge Spence was not forgetful of the great changes which have occurred in the nursing of the insane in recent years. His address constitutes an historical document in the record of that humane enterprise. It is a far cry to the lectures given by the late Dr. W. A. F. Browne to the attendants in the Dumfries Asylum in the year 1854. It is even a somewhat ancient reference to the inspiring ideas of Dr. Clouston and Dr. Campbell Clark, which resulted in the production of the *Attendant's Handbook* in 1885. Much progress has been made since then—more, indeed, than the most sanguine dared to hope. And to none is honour more justly due than to our President, who, by his assiduous and efficient guidance, has piloted the untried craft through unknown seas, and now resigns his command, leaving the vessel trim and ship-shape to continue her prosperous voyage.

We feel assured that our readers will adequately appreciate Dr. Mott's address on the "Relations between Syphilis and General Paralysis of the Insane." His labours have placed the subject in a new and searching light, and by those who have maintained the opinion that syphilis is largely the cause of general paralysis Dr. Mott's conclusions will be specially appreciated.

It is unfortunate in some respects that Dr. Stoddart's elaborate inquiry into anæsthesia in the insane was not discussed, owing to the short time at the disposal of the meeting. That can be remedied by a perusal of his paper as published in this number of the JOURNAL, and consideration of it at the next general meeting; but it is far from encouraging when a summary of elaborate observations extending over years of study is presented to an attenuated and languid assembly. It will become a question whether the strictly scientific work of our annual gathering should not be produced in the earlier part of each day, leaving the afternoons free, or perhaps partly occupied with the work of committees, which ever assumes larger proportions as the years roll on.

Practical details of asylum administration were duly considered, especially in a discussion on night nursing in asylums, initiated by Dr. Middlemass and Dr. Elkins. It has been widely recognised that the efficient care of patients at night is an important part of treatment. Long ago Dr. Yellowlees, convinced of the apparent inadequacy of former arrangements, redressed the want of balance between the night and day staff. Mr. Rooke Ley's ideal of permitting the day staff to leave the wards during the hours of night, and of replacing tired nurses with a night staff strong enough for all emergencies, and properly housed during their hours of repose, is also well known. The experiment of Dr. Savage at Bethlem, permitting suicidal patients to sleep in single rooms with open doors, was also noteworthy. Now the latest results of experience at Sunderland have been presented. In so far as the individual treatment of each case is concerned, we have no doubt that the more personal and the more continuous nursing is the better, both by day and night. But it is always a danger in the development of ideas that an extreme position may be held, while dangers are minimised. It may be generally conceded that the demented class, which constitutes the great majority of our asylum population, is less sensitive to discomfort than normal mankind, so much so that we have heard Dr. Whitcombe declare that a night alarm of fire and the presence of the asylum brigade apparently failed to disturb the patients in a large observation dormitory. That was a very striking anticipation of Dr. Middlemass's experience. But we hold that in the case of the sensitive, nervous, curable patient sleep is often a very real necessity, and that the dormitory is therefore often in a high degree unsuitable. Dr. Middlemass declares for the adoption of general hospital methods (always exclusive of the delirium tremens ward, we suppose), for the approximation of asylum methods to the surroundings of home. We should be surprised to hear of the treatment of meningitis in the general wards if side rooms were available; and we would regret to believe that the dormitory system is in accordance with the habits and desires of the decent poor who have to enter asylums to live *coram publico* by day and by night. The whole tendency of modern methods is towards the individual treatment of each particular patient. Dr. Middlemass and Dr. Elkins have shown how much can be done by individual care continued by night instead of being intermitted on the

approach of bedtime. We feel that in their enthusiasm for excellent results they have gone too far in suggesting that single rooms should be still more limited in number, even although they may cite the high authority of Dr. Bevan Lewis in holding that seclusion tends to foster hallucinations. The unreasoning mania of epilepsy, the monotonous verbigeration of the idiot, the long-winded orations of the general paralytic, even the stertorous breathing of the apoplectic, are surely out of place in dormitories where some poor soul may be struggling for sleep and sanity. And, after all, it is the poor soul that is our chief concern. In aggregates of humanity—waifs and strays, wrecks and derelicts—crowding the wards of every asylum, that must never be lost sight of. Fill a dormitory with irresponsive dements and nurse them *en bloc*, but find a place of quiet repose for such as sorely need it, although the rest gained may be but scanty, in the intervals of mental tumult.

We have referred to these events in the development of night nursing as indicative of the tendency of general experience and general opinion. It is a very modern conception. "Sairey Gamp" was exuberant not so very long ago. She has been improved out of general hospitals and asylums for the insane *pari passu*, and her departure has been hastened by the rapidly increasing prosperity of the country, the higher standard of comfort, the keener sense of our duty to the afflicted.

In a similar manner the construction of asylums has been modified, until we stand face to face with the proposal that separate buildings of moderate size should be preferred to cumbrous barracks. We have been travelling along that road ever since Sir John Bucknill showed how certain cases might best be housed in cottages; since the veteran Dr. Brushfield, in the early days of his career as a medical superintendent, designed a separate ward at the Chester Asylum—a ward which is still regarded as most efficient for its purpose. Now it must be decided what sizes of houses and what relations of blocks are best fitted for the practical requirements of our climate and rigorous supervision; while Dr. Middlemass and Dr. Elkins carry the question a step further, and invite us to declare that the sleeping rooms in these houses should be associated dormitories with but few exceptions.

The business of the meeting in other directions was transacted

with reasonable despatch ; but, as we have already indicated, the limited time at disposal does not allow of that full discussion and exchange of ideas which is so desirable on occasions of such importance. The alterations in the regulations affecting the nursing examinations will no doubt meet with general approval, and we trust that there will be no difficulty in arranging the examinations due in November.

In closing this brief note on the annual meeting we heartily re-echo the President's words in thanking the officers of the Association who did so much to render it a success ; and we cannot but express the hope that the high level of success then reached will be maintained in the future.

Asylums in India.

It is just two years since the attention of the Association was directed to the condition of Indian asylums and the defects in their management. Since that time the subject has not been lost sight of, and it is now most gratifying to find that the Government of India has taken it seriously in hand. It was a fortunate occurrence that before Lord Curzon left England to assume his duties as Viceroy the requirements of Indian asylums were brought under his notice. He promised to look into the matter immediately on his arrival in India. Through a mutual friend Dr. McDowall was able to bring his presidential address under the notice of Lord Curzon. Whether owing to that fact or not, we now see the beginning of the reforms so urgently required.

Surgeon-General Harvey, Director-General of the Indian Medical Service, has lately been on short leave in England, and he was good enough to communicate to Dr. McDowall by letter, and also by a brief statement at the recent meeting of the Psychological Section at Portsmouth, the intentions of the Indian Government as to their asylums. It is proposed to establish a Psychological Department composed of men who have had experience in the treatment of mental disease and in asylum management. Although they will enter the Indian Medical Service in the usual way by competition, and will remain members of the medical staff of the army, arrangements

will be made by which they will not be removed from their asylum work except when absolutely imperative. By having men with asylum experience it is hoped to give the insane of India the benefits of improved methods of treatment. It was originally proposed to have one central asylum for each province, but this has already been proved to be insufficient, and there will probably have to be two or three. As in other countries, considerable difficulties have been experienced in getting the authorities to see that hospitals are required, not jails, for the treatment of insane persons. Surgeon-General Harvey is doing his best to get the new central asylums constructed on modern lines. He has also recommended that the pay should be sufficiently good to attract suitable men early and to keep them in the speciality. They will begin at about 600 rupees a month, and rise to about 1400 rupees, with free house and the privilege of consulting practice, which is expected to be considerable in the neighbourhood of large cities. These are the main facts communicated by Surgeon-General Harvey. The scheme has not yet been approved by the Secretary of State for India, but it is understood that he is likely to sanction it.

So far so good, is all that can be said in the way of commendation, for it is quite evident that much more is needed than is indicated above. One of the most urgent requirements in regard to Indian asylums is their inspection by experienced men. At present the reports made by the inspecting officers present the clearest evidence that the authors are men of no asylum experience. The criticisms and recommendations are submitted to the Governor in Council, a body which does not possess that technical knowledge and practical skill which can enable it to deal intelligently with the important asylum questions which come up for consideration. These documents bear the stamp of having been produced in an office, the reports clearly show that the closest attention (of a kind) is devoted to asylum matters ; the results, however, are not adequate. Whilst, therefore, we welcome the promise of reforms, we cannot shut our eyes to the fact that they do not go far enough. We feel convinced that no good will follow these reforms unless they are accompanied by others. It would be absurd to expect a complete and perfect lunacy administration to be produced at the first attempt, but there can be no doubt that one thing

is indispensable—a thoroughly competent Commission in Lunacy, composed of experienced and tried men. That must be created before real good can result from the establishment of a Psychological Department. Without it, all will be as in the past—the men excellent as a rule, the system bad, the results most unsatisfactory.

As men with sufficient asylum experience do not exist in India, it has been suggested that a small Commission should be sent from England to inspect the asylums, and to give necessary assistance in constructing an administration which will gradually raise asylum management to the standard prevailing at home. There is much to be said in favour of such a travelling Commission. The work could not fail to be highly interesting, and the practical results should be of the utmost value. Finally, we must heartily congratulate Dr. McDowall on the achieved results of his labours. It is not often that a reformer commands instant attention.

Juvenile Offenders.

The Summary Jurisdiction Act, 1899, effects several salutary changes in the law as to the treatment of juvenile offenders. By the first section of the Act the first schedule to the Summary Jurisdiction Act, 1879 (which sets forth the indictable offences which can be disposed of summarily under that Act), is extended by the inclusion of two additional offences: (1) obtaining money, &c., by false pretences (Larceny Act, 1861, sect. 16); (2) setting fire maliciously to any wood, heath, &c. (Malicious Damages Act, sect. 16). It will, therefore, now be competent for courts of summary jurisdiction to dispose, with the consent of the accused, of any charge against an adult of obtaining by false pretences, where the amount of the money obtained does not exceed 40*s*. Where the accused is an adult pleading guilty, or a young person who consents to be dealt with summarily, the court can deal with the case, whatever may be the amount of money, &c., obtained. In order to prevent any misunderstanding as to what is necessary to constitute "false pretences," the Act provides that where a court of summary jurisdiction proposes to deal summarily with a

charge of obtaining by false pretences, the court shall, after the charge has been reduced to writing and read to the person charged, "state in effect that a false pretence means a false representation by words, writing, or conduct that some fact exists or existed, and that a promise as to future conduct not intended to be kept is not by itself a false pretence, and may add any such further explanation as the court may deem suitable to the circumstances." By the second section of the new Act, section 11 of the Summary Jurisdiction Act, 1879, which gives power to deal summarily with young persons by consent, is extended to all indictable offences other than homicide. Sir Matthew Ridley trusts that this provision will remove some of the difficulties felt by justices in dealing with youthful offenders. The number of such offenders committed for trial will no doubt be materially reduced ; and whenever a boy under fourteen consents to be dealt with by a court of summary jurisdiction, and is convicted of any indictable offence (other than homicide), the court will now have the option of ordering a birching—a means of punishment hitherto available only in the case of larceny and certain other specified offences. Several juvenile offenders have, in London, already received practical object lessons on the new *régime* that has come into force.

This is a further recognition by the English Legislature of the fact so long familiar to American medico-legal experts, and which, it should be added, the *Union Internationale de Droit Pénal* has done so much to impress upon the mind of the Old World, that the best way to avoid manufacturing criminals is to keep first offenders as far as possible out of prison.

Legal Aspects of Increase in Lunacy.

It seems impossible to resist the conclusion, in view of the latest report of the Commissioners in Lunacy, that the burden of insanity in the United Kingdom is increasing out of all proportion to the increase of the population. When first the scare of increasing lunacy was raised it was met, as was natural and, in some sense, proper, by much expert and official incredulity. Cases were better classified than hitherto ; chronic cases were counted again and again, and so on. These views

were put forward not only with characteristic caution by such experts as the late Dr. Hack Tuke, but also in a special report issued by the Commission in Lunacy itself. The question arises, how is the difficulty to be coped with from the *legal* side? The main problem undoubtedly is how to get incipient cases of insanity brought under *immediate* care and control, and here two *desiderata* present themselves. In the first place, some means must be found of inducing patients and the friends of patients to invoke curative treatment in time. Cannot the principle of voluntary committal established by the inebriates be utilised? In the second place, cannot the *medical* profession have greater immunity from harassing legal proceedings guaranteed to it than even sect. 330 of the English Lunacy Act confers? If this latter problem cannot be solved, we shall have to face official certification.

Curious Legal Point.

It is a principle of English law, at least as old as the year 1799 (*Merryweather* v. *Nixon*, 8 Term. Rep. 186), that, upon grounds of public policy, one wrong-doer cannot have redress or contribution from another in respect of the joint wrong-doing. A Divisional Court have recently held in *Burrows* v. *Rhodes* (1899, 68 L.J.Q.B. 545), a case arising out of Dr. Jameson's raid, that this rule does not apply where an innocent person has, by the fraudulent misrepresentation of others, been induced to take part with them in the commission of a criminal offence which is merely *malum quia prohibitum*, and for which he has been neither tried nor convicted, and that probably the case would have been the same even if he had been so tried and convicted. In the course of an extremely able judgment in this case, Mr. Justice Kennedy raised an interesting point under the Lunacy Act, 1890. A person who receives two or more lunatics into his house, not being a registered house or licensed house or asylum, commits an indictable offence, even if he acts under a *bonâ fide* and reasonable belief that the persons so received are not lunatics at all (*Queen* v. *Bishop*, 1880, 5 Q.B.D. 259). Suppose that in such a case the belief had been induced by false and fraudulent representations on

the part of the person bringing the patients, would he be liable to an action for damages at the instance of the proprietor of the house? Mr. Justice Kennedy thinks that this question should be answered in the affirmative. It certainly ought to be.

Adelaide Asylums.

The recommendation of a coroner's jury that additional medical assistance should be given in these asylums is one that should command the immediate attention of the Government of South Australia.

The Parkside Asylum, containing upwards of 700 patients, is under the sole charge of Dr. Cleland, who is also the responsible head of the Adelaide Asylum, with more than 200 patients, and a resident medical officer. The admissions are entirely dealt with at the Parkside Asylum, which must therefore yield an amount of work that one man cannot possibly deal with satisfactorily.

The prison for lunatics idea of an asylum is gradually dying out in England, and it is with regret that we find it lingering in the colonies. That an asylum should be a hospital for the medical treatment of mental diseases is not only true from a humanitarian point of view, but is a fact which tends to economy: and if the authorities concerned could be convinced of this, there would probably be little delay in granting the additional medical assistance so obviously needed in the Adelaide asylums.

The reports of the English Commissioners on Lunacy would afford the colonial authorities valuable assistance if they gave definite information of the proportion of medical officers to patients in the asylums under their jurisdiction.

The Abolition of Asylums.

The *New York Herald* (June 11th) devotes its front page to a report of the Pathological Institute, with head-lines on the "reversal of the treatment of the insane," and the statement

that "asylums may be totally abandoned." The pictorial illustrations, including a portrait of Dr. Ira van Gieson, although large, are not as startling as the head-lines.

The marvellous methods by which the abolition of asylums ("palatial hotels for the insane," we glean from the report, is the correct designation) is to be achieved are not described. Electrical force is vaguely talked about, but beyond the fact that all existing methods need reversing, nothing definite can be learned except that this is all based on or illustrated by the treatment of one case. This seems to have been a case of double consciousness following injury, which recovered after about two years of treatment. If this is exact, the time element in treatment does not appear to have been reversed to any great extent by the new procedure.

The first impression of this very amusing production is that the reporter had been hoaxed; but the pictorial representation of the patient in the doctor's studio makes it possible that some sort of interview occurred. In this latter aspect we must sympathise with Dr. van Gieson and his colleagues in being thus associated with the reporter's absurd exaggerations and perversions.

The danger to the advancement of science which results from sensational reporting on matters which the lay mind cannot easily grasp is a very real one, and we trust that neither the well-being of the Institute nor the reputation of its scientific staff will be harmed by the swaggering claims formulated by the *New York Herald* on their behalf.

Part II.—Reviews.

The Ninth Annual Report of the New York State Commission in Lunacy (1896–7). New York, 1898, pp. 1612.

This interesting and important volume is seriously handicapped by its bulk. Sixteen hundred pages of printed matter are considerably more than can be bound into a single volume of convenient size to be read with comfort. It is presumed that the book is intended to be read, for there is much important information in it, but its size is a distinct

discouragement to this desirable object. This end would more likely be attained were the report of the Commission and the reports of the individual hospitals of the State bound separately, and two much handier and more convenient volumes issued.

The New York State Commission in Lunacy was constituted in its present form in 1888, and its constitution and functions were described in this Journal in July, 1898. It is, however, only two years ago that all the public asylums in the State, with the exception of the criminal asylum at Matteawan, became subject to its jurisdiction. The last asylums to have a separate organisation, in addition to that already mentioned, were those connected with King's County and the City of New York. As half the insane in the State were cared for in these two asylums it is only within these two years that the policy of having a State Commission in charge of them all has been in operation. It is, therefore, too soon to estimate the full result of this important step, but in many directions it is already apparent that great good will be conferred by it. From the present report it is evident that in some instances the hospitals suffered from some of the regrettable features of American politics; but now that a uniform law applies to them all, and their care is vested in the hands of a strong and influential Commission, these features are much less likely to manifest themselves. Already this has proved to be the case, and it is hoped that in the future this element will entirely disappear, as of course it ought.

The first part of the volume is devoted to the report proper of the State Commission. and refers to general matters affecting the administration of lunacy in the whole State with its eleven public asylums. The whole number of committed insane in the State on September 30th, 1897, was 21,683; of these 840 were in licensed private institutions, the remainder being in asylums or poor-houses. The total receipts from all sources were $4,600,000, and the total expenditure $5,490,000, leaving a considerable deficiency for the year. This was, however, wholly covered by a balance accruing from the previous year. The whole number of admissions, excluding transfers, was 4370. 951 were discharged recovered, and 1592 died. The percentage of recoveries on admissions was 22·6, while the percentage of deaths on the daily average resident was 8·0. Both these figures are below the corresponding ones for England, which in 1897 were 37·6 and 9·8 respectively. Both of these factors will, of course, tend to an accumulation of chronic cases. The increase of patients at the end of the year was 733, being a percentage of 3·76. In England there was a similar increase of 3·62 per cent.

The appropriation for the support of the asylums was based on a uniform tax of one mill on property throughout the whole State. Formerly it was a *per capita* tax, and was levied at different rates in the districts corresponding to each asylum. Undoubtedly the new system is better, as it places the main burden of the care of the insane on the wealthier districts, which are most able to bear it. It also places the levying of the tax in the hands of a strong body, which is more likely to be fairly dealt with than when each asylum committee had to exert its influence with the State Legislature to obtain the requisite funds. For the succeeding year it was proposed to raise the tax to a mill and one tenth, but even with the increase so obtained the estimated expenditure,

especially for new buildings and repairs, was much larger than this appropriation would meet. The income from the tax was estimated at $5,000,000, while the cost of maintenance alone was expected to absorb about $4,000,000. This leaves $1,000,000 for repairs, improvements, and new buildings, while the estimate of what was necessary in this direction was over $2,000,000. Thus there was a regrettable prospect of having to curtail this most necessary expenditure. It would probably have been wiser and much more to the proper interest of the patients to have increased the tax at once, rather than to wait until it could not be delayed.

During the year the weekly *per capita* cost of maintenance was about 15*s.*, or about £39 a year. This is an increase of about 9*d.* a week, or £2 a year over previous years, but it is still considerably lower than the average cost prior to the constitution of the Commission, when it amounted to £43 per annum. An interesting estimate is made of the average cost to the community of each patient sent to an asylum. The average life of an insane person after admission to an asylum is stated to be about twelve years. The cost for maintenance, at £37 a year, would be about £450. The loss from the earnings of such a person would be about £360 more. The cost of buildings and furnishings comes to £110. The interest on all these sums for twelve years at 3 per cent. amounts to £330. The total loss thus amounts to £1240 for each patient who does not recover and might have done so. It is argued that any means which will tend to increase the recovery rate would therefore save that amount each year for each patient so recovered. This is made a strong plea, and we think very justly so, for considering the liberal expenditure of money on all means like y to promote the recovery of new cases as most wise, and in the end really economical. Statistics are given to show that on the whole the recovery rate improves as the nursing and medical care become better, and there can be no doubt that the patients are more likely to be humanely treated under such improved conditions. In the State of New York the average of nurses and attendants to patients is one to eight, a high proportion in a public asylum. We think the above argument may fairly be used by a medical superintendent in endeavouring to persuade his committee to spend wisely and not niggardly on all legitimate means for promoting the recovery of recent cases.

The vexed question of the alien again comes up for comment in the Report. The average of aliens amongst the whole population is 25 per cent., while in the asylums it is 50 per cent. This means that about 5000 patients are in the asylums for whom the State ought not, strictly speaking, to be charged. With a view to lessening this burden the Commission recommends that the present limit of residence during which an insane alien can be returned to his native country should be extended from one to two years.

A large part of the Report is taken up with a description of the Pathological Institute, which we think is one of the most important results of the establishment of the Commission. A detailed account is given by the Director, Dr. van Gieson, of the building and of the various branches of work which it is intended should be undertaken there. These are most comprehensive, and rather dwarf similar

undertakings in England and Scotland. In the New York Institute there is a staff of sixteen workers, whose investigations comprise the following branches: General Pathology, Anthropology, Psychology, Biology, especially its cytological branch, Bacteriology, Physiological Chemistry, and Comparative Neurology. It will thus be seen that the fundamental problem of insanity, its physical basis, is being attacked from a great many points, and the future work of the Institute will be looked forward to with the greatest interest by all those who concern themselves with the solution of this most important problem. Dr. van Gieson puts forward a very strong plea for this comprehensive and general attack on the citadel of knowledge, and with his conclusions no one with any knowledge of the subject is likely to be at variance. He is, however, rather long-winded and unnecessarily reiterative at times, and shows an undesirable tendency to depreciate the work of solitary observers in the field of the pathology of insanity. It is true that the field is a very large one, and that one man cannot possibly devote his attention to more than a limited part of it. But those who are acquainted with what has already been accomplished by various workers in this country and on the Continent are aware that already a great deal has been added to our knowledge. It must also be remembered that the subject is the most complex and difficult in the realm of medicine, and that the physiology and minute anatomy of the nervous system is still in its infancy. One cannot, therefore, expect the knowledge of the abnormal to be ahead of that of the normal, even though it be granted that the former often throws unexpected light on the latter. We shall expect the New York Institute to take a leading part in the capture of this necessary position after Dr. van Gieson's bold challenge. He shows a fine contempt for psychiatry. He says, "It neither receives any new material from the external world, nor is it able to give out anything original. It is sterile and barren, and is desolately isolated from its sister sciences. It has become petrified." Whatever truth, if any, there is in these statements we imagine is due to the fact that psychiatry is and has for some time been waiting for the pathologist to give some explanation of a thousand and one facts which it can place before him. In all departments of medicine a knowledge of symptoms has invariably preceded the knowledge of their cause, and until the latter is attained treatment must always be more or less empirical. It is so now with psychiatry, and it will remain so until pathology has come to her assistance. It is because we see a prospect of this that we so heartily welcome the establishment of the New York Institute, and desire that it may be even more successful than we can anticipate.

In 1897 the Institute was in the second year of its existence. Its cost for the year was £7660, of which £2660 was for salaries and wages. The balance was for equipment and maintenance. The former of course consumed the greater part, and will not again recur. The staff, as already stated, consists of sixteen workers, and all but two receive salaries of £180 a year, rising £20 yearly to £240. This is not a large sum considering the highly specialised and prolonged course of training which most of the staff have already gone through to fit them for their present work. The director makes a strong appeal for adding to the staff, in order that his scheme may be adequately over-

taken. The reduction in annual cost under the heading of equipment, which of course is by far the heaviest in the first year or two, might, he thinks, justly go towards this desirable increase of staff. A plan of the Institute is given, and from this it appears that the building is well planned and well equipped. Already, however, there is a lack of accommodation for the storage of specimens. This will, of course, become still more apparent as material accumulates, as it does in a surprising way.

The whole scheme is worthy of the high place which the State of New York occupies in its efforts to care for the insane, and the results accruing from it will be regarded with the liveliest interest by all who are concerned with this important subject. America has already shown what she can accomplish on a great scale in other branches of scientific work, as witness the brilliant results she has achieved in astronomy and astrophysics. There seems to be no inherent reason why she should not also do great things in this her latest venture.

An interesting feature in the administration of lunacy in New York is the monthly conference of the Commissioners with the superintendents of the public asylums. At these meetings many practical questions are discussed and settled by vote, and when further information is desired a small committee is appointed to obtain it. In this way reliable information is got and made common property. This is much more satisfactory than to have information collected by circulars, or even by visits to asylums, as one has so often to do in this country. So far as can be gathered from the printed reports of these conferences, the presence of the Commissioners, who are of course not bound by the decisions come to as regards their own special functions, does not seem to be attended by untoward results. The only objection to be urged against such meetings is the possibility of individuality in administration being stifled ; but even though this may occur—and there are as yet no signs of it—there are many countervailing advantages, and in the end this defect would probably work its own cure.

The Commission makes several recommendations to the Legislature for improving the insanity laws. Amongst these the more important are—

That legislation be provided for determining the number of patients that can properly be cared for in the respective State hospitals.

That land for State hospital purposes be acquired under the same procedure as now followed by the Department of Public Works.

That the regular meetings of the representatives of State hospitals for the insane in conference with the Commission be held once every sixty days.

That the jurisdiction of the State Board of Health be made exclusive within a certain radius of each of the State hospitals.

That the statute be so amended as to provide that when herds of cattle belonging to the State hospitals are destroyed under the regulations of the State Board of Health by reason of the existence of tuberculosis, the institution may file claims for damages with the secretary of the Board of Claims directly, without the interposition of a special statute.

That the Matteawan State Hospital for the criminal insane be made by law a part of the State hospital system.

Some of these have been advocated in previous years, but not successfully.

Statistics relative to the insanity of the whole State are furnished on the usual lines. The chief of these have already been referred to. The rest differ but little from the statistics given for this country.

During the year Mr. Reeves retired from the Commission, after serving on it for eight years. He was a lay member, and was succeeded in that capacity by Mr. Parkhurst.

There are numerous other points in the report of the Commission, but space forbids entering on them. The second part of the volume contains the reports from each of the State hospitals. A few words must suffice for a notice of these.

Utica.—Dr. Blumer again recommends the boarding-out system for the chronic harmless insane. We are sorry to see that the Commission distinctly discourages the idea, for reasons which do not appear adequate in view of its success elsewhere.

Willard.—Dr. Macy, who has succeeded Dr. Mabon as superintendent, encourages the system of parole, and speaks highly of its benefit when cases are judiciously selected. An epidemic of diphtheria occurred during the year, and led to an examination of the water-supply and sewerage systems. We hope to hear that these have been made satisfactory.

Hudson River.—Dr. Pilgrim reports that about a third of his patients are on parole, and only one broke it. Recommendations are made for various extensions and improvements.

Middletown.—Dr. Talcott's report is, as usual, one of the longest of the series, but it might with advantage have been much curtailed. He devotes a great deal of space to influenza and its treatment. A list of nearly forty drugs is given which he has found useful in combating its sequelæ, but he has apparently not yet found a preventive. There is, as in most of the other asylums, a very complete course of training given to the staff

Buffalo.—Dr. Hurd reports on the special arrangements made for lecturing to medical students.

Binghampton.—Dr. Wagner recommends the construction of a hospital building for acute cases.

St. Lawrence.—Dr. Mabon records the use of thyroid feeding in the insane, and gives the results. These are not so satisfactory as in some of the trials made in this country. Valuable bacteriological work was done at this asylum.

Rochester.—Dr. Howard also recommends the erection of a hospital for acute cases.

Long Island.—Dr. Dewing has succeeded Dr. Sylvester as superintendent. Many structural and other improvements were necessary in this asylum, which has only recently come under the direct care of the Commission.

Manhattan.—Dr. A. E. Macdonald has a heavy responsibility in superintending nearly 7000 patients. He was involved in litigation for refusing to admit a patient for whom an order for commitment had been

made out by the judge. He won his case, and thereby had it established that the superintendent of an asylum is the sole judge as to whether a patient will be admitted or not. The difficulty arose in connection with a patient who was a dotard. The Commission and the superintendents of asylums do not appear to regard such patients as technically insane. A large and increasing number of such persons are sent to the asylums, and as they need much attention and nursing the whole question has assumed considerable importance. Its solution ought to be possible by friendly conference rather than by appeal to law. But now that the law is declared to be on the side of the superintendents there may be less difficulty in future. It is, however, very questionable whether it is altogether desirable to have virtually two competing authorities deciding on a person's insanity. The remedy of discharging a patient as not insane is always open to a superintendent without coming into actual conflict with the judge's order.

Collins' Homœopathic Hospital.—This is a new asylum, which was to be opened in 1898. Dr. Allen, of Middletown, has been appointed as superintendent.

Many interesting photographs accompany these asylum reports.

Psychologische Untersuchungen über das Lesen (*Psychological Investigations on Reading*). By Prof. ERDMANN and Dr. DODGE. Halle, Max Niemeyer, 1898, pp. 360, price 12*s*.

This most interesting work gives a full account of a number of experimental investigations on the psychological conditions which accompany reading. The scope of the experiments was limited to two lines of investigation: 1, the optical perception of printed symbols; 2, the reproduction of the sound symbols set in motion by the perceived printed symbols. The authors purposely excluded a third most important element which is present during intelligent reading, viz. the reproduction of the meaning associated with the sound symbols. They limited their researches to letters and words only.

The previously accepted opinion, advocated by Grashey, Wernicke, and others, was that in reading, each letter of each word is successively perceived and recognised, and its corresponding sound called up. The authors' experiments go directly against this, and prove conclusively that such is not the case. They investigated first of all the number of letters clearly seen and recognised when the eye is directed to a certain fixed point in a line of print, and they found that it measured from 8 to 13 mm. This is very much less than the corresponding area of the fovea centralis, or centre of clearest vision. They next directed attention to the eye movements which occur during reading, and found that these were fairly constant when the text read was easily intelligible and not quite unfamiliar. They also found that in reading along a line from left to right the eye rests at fairly definite intervals on certain points in the line, during which the letters around these points are recognised. The number of these points varies, of course, with the length

of the line, but they are separated from each other by intervals considerably greater than the areas of distinct vision. That is to say, letters, and even words, can be recognised which are situated to right and left of the field of distinct vision. The pauses in the movements of the eyes take up much more time than the movements, and the ratio varies according to the familiarity and intelligibility of the text. They also proved that it is impossible to recognise letters during the progress of the eye movements. They therefore designate the pauses as reading pauses. Their main experiments were directed to a full examination of these reading pauses, and the field covered by the eye during them. It is impossible fully to enter into these experiments, but some of their main conclusions may be stated. When letters succeed each other so as to form words, four times as many can be recognised during a reading pause as when they do not. Familiarity with their outline, therefore, counts for a great deal in the recognition of words during reading. The same thing applies to the association of words in intelligible sentences. They further established the curious fact that a word of four letters can be recognised in less time than a single letter. They also critically examine, though not on an experimental basis, the process of apprehension of the meaning of symbols, and conclude that "discrimination" does not enter into it.

The whole work is a model of what such a research ought to be, and is further enhanced by literary elegance. More work on similar lines is earnestly to be hoped for.

The Investigation and Estimation of the Traumatic Element in Diseases of the Nervous System (*Die Untersuchung und Begutachtung bei traumatischen Erkrankungen des Nervensystems*). By Dr. P. SCHUSTER. Berlin, 1899, pp. 196, price 4*s*.

In these days of compulsory compensation for accidents it must necessarily have fallen to the lot of many asylum physicians to have had to investigate and estimate the effects of injury on the mental and nervous diseases of certain of their patients. As, too, it is chiefly in connection with the nervous system that complaints, both real and spurious, are made of the effects of accidents, and as in addition it is in this realm that the detection of imposture is most difficult, it is of prime importance that the physician who investigates such complaints should be well prepared for the thorough performance of his task. Dr. Schuster's book gives a very complete account of the methods of investigating such cases, and of the symptoms to which special attention should be directed.

In the first chapter a short account is given of the necessary legal processes as they exist in Germany. They seem to be rather complicated, and to tend to considerable delay in the settlement of claims. In the second chapter important points in the history, hereditary and personal, are touched upon. The chief of these are an hereditary tendency to nervous disease, and the existence, previous to the injury, of alcoholic habits in the patient. Stress is also laid on investigating his nervous and

mental condition previous to injury. Next follows a chapter on the condition at the time of the examination. This is a very complete account of the methods of investigating all the functions of the nervous system. The various parts of the body are touched upon in serial order, and many useful hints on the detection of fraudulent complaints are given. This is naturally the most important part of the book, and occupies about half of it. There is nothing novel in it, but the various essential points are clearly described and well arranged. If the investigation of a case is carried out under the various headings into which this chapter is divided, it will effectually ensure that no important point is omitted, as might easily happen were one not performing such examinations frequently. The fourth chapter is concerned with clinical observations, under which head are included all the mental symptoms. Alienists will be thoroughly familiar with all that the author has to say on this point. Next follows a chapter on simulation, probably the most important question to decide in every case. For this a knowledge of nervous disease not due to accident is of great service, for, as the author points out, the more of this one sees, the less inclined is one to be dogmatic on the question of imposture. He bases his diagnosis of simulation not so much on certain symptoms as on the recognition of an intention to deceive, which is a much more difficult matter to decide. A knowledge of human nature is probably of more service than anything else in such a dilemma. It must also not be forgotten that it is possible to have a mixture of both reality and imposture, and these have to be separately estimated. This is often a matter of the greatest difficulty, and gives occasion for considerable diversity of opinion even among experts. A few practical hints on the best method of drawing up a report on a case of alleged disablement from injury, and some concrete examples of such reports on actual cases, bring this interesting book to a close. The only regrettable feature about it is that there is no index.

Die ambulante Behandlung der Fracturen der unteren Extremitäten (*The Ambulatory Treatment of Fractures of the Lower Extremities.*) By Prof. DOLLINGER. Published by Urban and Schwarzenberg, Vienna, 1898, pp. 24.

This excellent article, though on a purely surgical subject, has considerable interest for asylum doctors. These all know the difficulty of treating a restless patient who has sustained a fracture of the leg when it involves his being in bed for several weeks. Under the method advocated by Prof. Dollinger this is not necessary in any but a very small percentage of cases. It consists in the application of plaster-of-Paris bandages to the broken limb within a day or two of fracture. The principle is not a new one, as it was advocated and used by Larrey over a hundred years ago. Recent methods, however, have allowed of its more extensive application.

The author has treated 110 cases with very satisfactory results. The bandages consist of cambric impregnated with the best plaster of Paris,

and it is recommended that no more plaster be rubbed in after the bandage has been applied. In eighty-two of the 110 cases only one application of the bandage was necessary. In seventy of the cases fracture had occurred below the knee. In forty-three of these the bandage was applied by the fourth day after fracture, and in eleven the patient was treated on admission to the hospital. Special attention has to be paid to the points of support and to points of pressure. In all but two cases walking was possible at once or very soon after the bandage was applied. In cases where the fracture is very oblique the bandage is applied in two stages. The lower one is first put on and allowed to set, after which the necessary extension can be safely made while the upper one is being finished. In fractures of the upper third of the leg the bandage was carried as far as the middle of the thigh, and if very oblique to the pelvis. The bandage was kept on for six weeks, and in all but ten cases union was complete by that time.

Forty cases of fracture of the thigh were treated by a similar method, and with equally good results. Half of them were able to walk on the first day, and in no case was the shortening more than 3 cm. In considerably more than half the shortening was 1 cm. or less. The bandage was always applied in two stages, the upper round the pelvis, and extension was kept up during its application. It was allowed to remain on seven to eight weeks, and in only two cases was union not complete by that time. The author considers his results so satisfactory as to induce him to advocate its extensive use. This has also been urged by Mr. C. W. Cathcart of Edinburgh, by whom it has been thoroughly tested. It certainly has the very great merit that, after treatment is over, the patient is at once able to walk, whereas after treatment in bed the patient may have to spend as long a time, or even longer, in regaining the use of his muscles as has been spent in the union of the fracture. For patients in asylums it has the additional merit of not being prejudiced by their mental condition.

A Theory of Reality: an Essay in Metaphysical System upon the Basis of Human Cognitive Experience. By GEORGE TRUMBULL LADD, Professor of Philosophy in Yale University. London: Longmans, Green, and Co., 1899, pp. 556. Price 18*s*.

In spite of our dogmas and doctrines, our theories about life and death, after-existence or complete annihilation, we all unite in yielding a kind of unconscious reverence to him who is thought to be stepping across the border-line into the Unknown, and this is what strikes us about Prof. Ladd's works.

These abstruse metaphysical subjects touch closely upon our religious emotions. What do we know in physics outside of phenomena, *i. e.* of material substances themselves? What do we know of the essence of the Divine Being? Can we say that phenomena remain, or that they go, or that the same phenomena are in the same places at once? Newman in his *Apologia* relates his earliest religious development to be

a mistrust in the reality of material phenomena, which caused him to rest in the thought of two, and two only, absolute and luminously self-evident beings—himself and his Creator. The tendency of thought in the present day is towards negation, the notion of self-existence as a philosophical expression being non-existent; and some there are who cannot conceive of force without matter—which certainly denies to thought any executive power of its own. To us the leap from unconsciousness to consciousness is hardly thinkable without an external agency, and matter which is dead must have thought and spoken. The only explanation is that Will, which is immaterial, must have caused matter to exist, and the final cause must therefore be mind. Surely the atom possessed of a *tendency* towards endless development presupposes in the originator almost infinite foresight!

It is the province of philosophy to criticise and treat systematically these different realities of man's knowledge so as to bring them into an ideal unity. Ladd deals in this volume with the problem of the reality known. In a recent work, also reviewed in this JOURNAL, he dealt with the problem of man as a knower. Both are really two aspects of one problem—the object of human critical and reflective thinking—and admit of relatively independent discussion. The contents of the volume are purely speculative, as all abstruse reflections upon the problems of existence must needs be. The plea of the author, who appears to us more in sympathy with the sage of Königsberg than with the more modern students of the experimental schools, in placing this interesting volume before his readers is that an aim should be made to harmonize our experiences in some view of the world and of human life that shall be free from contradiction, and that shall interpret and illumine them all; and to do this in a way that may be truthful, rich in content, æsthetically inspiring, and ethically satisfying. No apology is needed for the statement that to think soberly and thoroughly deepens and enriches the life of conduct and the development of character, and we commend with pleasure Prof. Ladd's aim to get at reality in his successful effort at systematic metaphysics.

Experimental Study of Children. By Dr. ARTHUR MACDONALD. Published from Government Printing Office, Washington, 1899.

Dr. Arthur MacDonald as specialist to the United States Bureau of Education, Washington, has had exceptional opportunities in conducting the experimental study of children, assisted by State aid, which enabled him to collect all the principal forms of instruments employed in anthropological and physico-psychological research. The volume before us comprises 400 pages of tables and closely printed matter, presenting Chapters XXI to XXV of the Report of the Commissioner of Education, U.S., 1897–8.

A special study was made of 1074 Washington school children—

"(1) As to the cephalic index and sensibility to heat and locality

upon the skin, with relation to sex, mental ability, and sociological condition; based upon measurements by the author."

"(2) An anthropometrical and sociological study of all the school children; based upon measurements by the teachers."

"(3) A purely psychological inquiry as to comparative mental ability in the different school studies as reported by the teachers."

"(4) A study of the abnormal children in the schools as reported by the teachers." It must here be remarked that under the heading "abnormal children" the author includes such points as sickliness, nervousness, defect of sight, hearing, speech, as well as lazy and unruly children.

Conclusions arrived at as to these 1074 children are—(1) Dolichocephaly increases as ability decreases. (2) Children are more sensitive to locality and heat on the skin before puberty than after. (3) Boys are less sensitive to locality and more sensitive to heat than girls. (4) Children of the non-labouring classes are more sensitive to locality and heat than those of the labouring classes. (5) Coloured children are much more sensitive to heat than white children. Schedules are given upon which the points observed were recorded. Numerous detailed tables as to the anthropometric and sensory measurements show the correlative sociological condition as to mental ability.

It may be thought that no clear picture of the child below the normal is here presented to the reader to guide his ordinary observations when instruments of precision are not at hand, or their employment is impracticable. Anthropometry and exact sensory tests afford useful information; but the former need supplementary observation of the conformation of the individual features, the mouth, palpebral fissures, nose, ears, as well as the palate. Sensory tests, at least those producing an impression short of pain, depend largely upon the capacity (mental) of the individual in verbal response; these need to be supplemented by some general observations of the motor action and response of the nerve system. Dr. MacDonald's inquiries afford valuable information, and would be of still greater importance if combined with such further observations as are recorded in the *Reports* of the Childhood Society (London).

A very useful section of this volume gives a full description of the instruments used in experimental study, together with ninety-two illustrations, and many tables setting forth results of their employment. The instruments described include a very complete list of those required in anthropometry and in Bertillon's system of identification; an ingenious palatometer is illustrated. Several forms of dynamometer are described, including examples intended to show the power of pressure by the lips and the tongue; these might perhaps be of use in the investigation of cases of general paralysis. Numerous instruments for the graphic study of tremors and involuntary finger movements are illustrated, and appear likely to afford interesting results. About thirty forms of æsthesiometer, showing sensitiveness to weight or pressure, to heat and touch, are figured, and some results of their use are tabulated. A very valuable bibliography of experimental study of children concludes this chapter.

The concluding section of this work is devoted to a review of child

study in the United States, mainly dealing with the psychological researches of Dr. Stanley Hall as to the contents of children's minds; the results are well classified according to the age and sex of the children. An excellent bibliography of child study concludes the volume, which is full of points of interest for those who wish to study the mental evolution of children.

L'Instabilité mentale: Essai sur les Données de la Psycho-pathologie. Par G. L. DUPRAT. Paris: Alcan, 1899, pp. 310, 8vo. Price 5 francs.

This book belongs to a class which, happily or unhappily, we meet with much more frequently in France than in our own country. The author is a professor of philosophy and a doctor of letters; if he is not also a graduate in medicine he certainly has a knowledge at first hand of the facts of mental disease, as well as a wide knowledge of its literature, and has himself contributed original articles to medical journals. He here attempts the task of viewing the facts of modern morbid psychology from a philosophical standpoint.

At the outset he frankly declares his object and his position. The book, he states, is simply a philosophic essay; he is not adding to science, but criticising scientific results and examining scientific first principles. He thus cuts himself off from those who, like Féré, endeavour to find a physiological basis for the phenomena of morbid mental troubles; he wishes to establish the priority of the rights of psychology to explain disturbances within its own sphere. Further, he finds that mental instability, taken in the broadest sense, is the characteristic of all psychopathic states; psychological instability he regards as primordial, and the source, not the result, of the various disorders of sensation and movement. He argues that thought is always tending to vary, and that, in the absence of any constant principle of systematisation, guiding mental evolution, the mind becomes the prey of its own natural instability. The whole argument of the book may thus be said to be stated in its title. The author expresses special indebtedness to Janet's *Automatisme psychologique*, in so far as that book may be said to reveal the mental services which psychology and pathology can render to each other; he is, however, by no means in agreement with Janet in matters of detail.

The greater part of the book is devoted to the monotonous application of the formula, in the first place to the various forms of mental activity, and in the second place to the leading forms of mental disorder. There is little difficulty in showing the wide prevalence of mental instability, except in regard to a certain number of psychoses, where stability is too obvious a phenomenon. In regard to these (melancholia, systematised delusions, obsessions, &c.) the author argues that the higher mental activities are really unstable; so unstable, in fact, that they have disappeared altogether, and that lower mental centres are free to effect rigid co-ordinations of their own. This

explanation may be taken for what it is worth; at all events, the formula is saved. The concluding chapter contains various remarks, excellent but not specially novel, concerning the importance of training and education in the prophylaxis of mental disorders.

We have patiently plodded through Professor Duprat's book, for the excellent equipment of the author and the serious manner in which he has approached his task, seem to deserve respectful consideration; but it can scarcely be said that the net result of the perusal is large. The formula is so wide that it is easy to accept it; it is equally easy to assert that it scarcely carries us very far. It remains still possible for the physiologists to step in and attempt to carry the analysis further back; and we may be allowed to agree with the distinguished psychologist (Münsterberg), who has recently declared that "the renunciation of a physiological basis for every psychological fact means resigning the causal explanation altogether." Nor can it be said of Professor Duprat, as of some greater philosophers, that in the effort to apply a formula he has said many wise and admirable things by the way. No doubt there is a class of minds to which the mere application of a formula is a source of satisfaction; and, bearing in mind the existence of that class, it may be safest to sum up in the cautious words of President Lincoln: "If anyone likes this kind of thing, I should say that this is the kind of thing he will like."

L'Ignorance et l'Irréflexion: Essai de Psychologie objective. Par L. Gérard-Varet. Paris: Alcan, 1898, pp. 296, 8vo. Price 5 francs.

This book belongs to much the same class as that we have just noticed. It is written by a graduate in philosophy and doctor of letters, who proposes to deal, from a literary and philosophic standpoint, with a certain group of scientific facts. The chief distinction at a first glance is that M. Gérard-Varet has by no means so ample a scientific equipment as Professor Duprat; on the other hand, he has more original and suggestive ideas to offer, and even when his views are not new he is often able to put old facts in a fresh light.

The subject is a somewhat novel one. The author proposes to deal with ignorance as a factor in moulding the beginnings of human conceptions, activities, science, and culture. The ignorance he is dealing with, it must be understood, is by no means a merely negative quality; on the contrary, it involves freedom from the paralysing influence of knowledge, and draws energy from its own inner visions and imaginations. At the same time the more deeply ignorance draws on its own resources the more profoundly convinced is it of the small part played by itself, and the more persistently it assumes external powers to account for the phenomena it becomes conscious of.

The author begins his historical investigation at a point midway between primitive and scientific conceptions, and then pushes his way backwards to the more elementary phases of thought. After a

careful study of mental passivity in Plato he turns to Homer, and shows how, in Homeric psychology, the part played by the individual is reduced to a minimum, the individual being regarded as incapable of producing an act by himself, and remaining a more or less passive instrument; even the Homeric gods, with the partial exception of Zeus and Hera, do not deliberate, but are the prey of motives furnished to them by external influences. The *Iliad* presents to us a state of partial ignorance, of incomplete mental passivity, since Homer was clearly not himself altogether duped by the mythological figures whom he brings on to the stage. From this point, therefore, the author pushes the study of ignorance further back, and proceeds to show how metaphor for the primitive mind indicates a real affinity of remote things, and to investigate the attitude of the primitive mind towards art, which he defines as a fallen idolatry, and the work of art an idol—the statue of the god, for instance, having really something of the same qualities as the god. He then turns to the consideration of rites, and points out that religious observances are really in the first place artificial reproductions of natural phenomena, enacted to enable the worshipper to gain power over those phenomena: "by his practices the priest is not only the anxious spectator of things; he aids them and hinders them in their progress; he becomes one of the forces of nature, and contributes to the order of the world." In the next chapter language is similarly dealt with; to the reflective mind of the civilised man a word is but a *flatus vocis;* to ignorance it is a living thing, existing by itself and with a value of its own. Dreams likewise have their own reality.

In the second part of the book, on "the principles of things as they appear to ignorance," the author shows how the primitive man must necessarily regard himself as eternal, and how he feels himself not only capable of doing all things, but of knowing all things. It is only as knowledge grows that the sense of the unknown develops. But that ideal of knowledge which we place far in the future was a present possession to our ancestors; primitive man unites in himself all those characters which we call the absolute.

At the conclusion of this interesting and suggestive essay the author proceeds to sum up and balance the respective advantages and disadvantages of the methods of ignorance and of science. The more primitive conceptions of ignorance produce self-confidence by regarding subjective creations as objective, and they excite to mental fecundity, and the free play of human volition. They have given birth to the gigantic ambitions which at the cost of great wars have founded the first civilisations. But, on the other hand, these splendours are fragile: in the first place, ignorance knows no methods; everything is possible, everything is unstable to ignorance. In the second place, with ignorance there is no progress, and its most splendid inspirations fail suddenly, leaving nothing behind. We may, therefore, reconcile ourselves to the more sober, slow, and certain methods of science and reflection, which have not indeed driven the inspirations of ignorance out of the world, but have entirely dominated it and opened a new era in the history of thought.

I Sogni (*Dreams*). By SANTE DE SANCTIS. Turin: Bocca, 1899, pp. 390, 8vo. Price 5 lire.

Dr. Sante de Sanctis, of Rome, already known as the author of a little book on the diagnostic value of the dreams of the hysterical and epileptic, has by the present volume, which he describes in the sub-title as "the psychological and clinical studies of an alienist," achieved the foremost place among living workers in the field he has chosen to cultivate. He has written a comprehensive study of dreams which is full of new observations, and his attitude is always objective and clinical.

An introductory chapter is followed by one on methods, in which the author argues that dreams may be studied in an exact and scientific manner, setting forth at the same time the methods adopted by himself as well as by previous scientific observers. This is followed by a long chapter on the dreams of animals, which is almost entirely new, founded on information given by experienced breeders and others. The next chapter deals with the dreams of children; relying on his observations of his own children, and those of women teachers, the author concludes that dreaming occurs in the first week of extra-uterine life, but that conscious dreaming rarely occurs before the fourth year. This chapter is followed by a discussion of the dreams of the aged; the author finds that dreaming in old age is very much under the influence of atmospheric conditions. The next chapter, on the dreams of adults, is founded on 220 sets of answers to a detailed *questionnaire* circulated by the author among healthy adults; of these, 15 per cent. of the men and 9 per cent. of the women never dreamed, or at all events could give no account of their dreams. The next chapter, on the dreams of the neuropathic, covers much the same ground as the author's previous book, but deals more broadly with a larger number of cases; it is suggested that in hysteria and epilepsy, perhaps also in neurasthenia, there are dream equivalents of the nervous disorder. In studying the dream-life of the insane the author confines himself to certain special pathological groups, and brings forward a number of detailed observations which cannot usually be summarised. With regard to the hallucinations of the alcoholic, which have been most carefully studied, he believes he can bring forward certain new characters, such as the prevalence of insects in the zoopsic visions, the characteristic frequency of tactile and motor images, and the tendency to hypnagogic hallucinations of hearing. The following chapter contains an investigation of the dream-life of eighty-five criminals; the general conclusion is that the dreams of criminals are marked by the absence of the element of emotivity and sensibility; in poverty of dream-life they approach imbeciles, dements, and old epileptic cases. A discussion of the emotions experienced during sleep, and their relation to the emotions of waking life, is full of interesting points, but does not lead to any very novel conclusions. The author follows the general tendency at the present day to accept the James-Lange or physiological theory of emotion. The concluding chapters deal with the manner in which dreams may initiate insane delusions, with the physiology of dreams, with their experimental production, with the hypnagogic state, and with the marvellous element in dreams, the author

maintaining an attitude of reserve with regard to the possibility of telepathic dreams.

It will be seen that although Dr. de Sanctis warns the reader that he has not attempted to write a complete treatise, and that there is nothing startlingly novel in his conclusions, his work is very comprehensive and full of interesting original matter. Each chapter is followed by a bibliography.

Conduct and the Weather (*Monograph Supplement, Psychological Review*). By E. G. Dexter. London and New York: Macmillan and Co., 1899, pp. 105, large 8vo. Price 1 dollar.

The special interest of this essay, which is written by a professor of psychology in Colorado, is that it is, in the words of the sub-title, "an inductive study of the mental effects of definite meteorological conditions." Hitherto the various writers who have touched on this subject have mostly confined themselves to the influence of season or of temperature alone. Prof. Dexter analyses weather not merely into height of barometer and thermometer, but into the conditions of wind, humidity, &c., and their various combinations, and thus reaches results which are often precise and interesting as well as novel. He has the advantage of residing in the famous atmosphere of Denver (though some of his observations refer to New York and other places), and it appears to be by no means an unmixed advantage: the special effect, he says, seems to be an excessive stimulus to nervous discharge; its high and excessively dry position produces what he describes as "a chronic state of neurosis." By this, he adds, "I do not mean a pathological condition, but a slightly increased nervous tension, which all except the strongest and most phlegmatic feel. It shows itself frequently in mild insomnia or an occasional irritability of disposition, though not in melancholia. Even the horses are not free from the influence." Both athletes and horses have produced astonishing records, and a similar effect upon mental work is also recognised, but the resulting collapse is all the more marked, and professional men need longer and more frequent vacations at a lower altitude than persons living in a more humid climate. The school year is shortened in accordance with this requirement.

The investigation covers school records, assaults, prison punishments, occurrence of insanity, deaths, suicides, murders, and clerical errors in banks. The whole monograph is full of detailed results; a few of the more interesting may be noted.

In schools in New York, cold, calm, and clear days are those on which behaviour and work are both at their best, while the worst conditions prevail on muggy days, with hot and windy ones in the second and third places. Boys seem to be more influenced by these conditions—at all events, by heat, cold, and wind—than girls. In Colorado it is specially noted that wind has a disastrous effect on the pupils, and that they are always at their best on calm days.

The height of the barometer is not found to be a potent influence in

itself; it is chiefly effective through the state of wind and storm with which it is largely associated.

Dryness of air is an important factor, since it induces restless activity of mind and body; although bracing and vitalising, it produces in the pupils phenomena which in the eyes of teachers constitute disorder. In Colorado this effect is emphasised, the resulting excesses in school children amounting to not less than 400 per cent., and for suicide and murder very much more. The author attributes this not to dry air *per se*, but to the universally accompanying electrical condition. Contrary to what might be expected, extreme humidity is found, as regards nearly every condition investigated, either to have no influence at all, or else to have a favourable influence. Suicides, for instance, generally choose fine weather, and show especially marked aversion for wet weather.

The effect of wind is found to be very much greater in Colorado than New York. In the latter city it seems to be somewhat beneficial; in Colorado even winds of moderate velocity are accompanied by nearly five times the normal number of school misdemeanours.

The suicide curves reveal little that is new. In reference to assaults it is found that spring (March) and autumn (October) are the periods of climax, and the author believes that this is due to unseasonably hot days; during excessively hot periods in summer assaults decrease. With regard to assaults, and to a slight extent the onset of insanity, it was found that weather has a markedly greater influence on women than on men.

Errors in banks are found to occur most frequently on fine days, and when the clerks are feeling at their best. This is due to the fact that depressing or disturbing climatic influences lead to self-distrust and consequent greater care in checking work, while a state of well-being induces self-confidence and carelessness.

On Inhibition (*Monograph Supplement, Psychological Review*). By B. B. Breese, A.M. London and New York: Macmillan and Co., pp. 65, large 8vo.

The conception of inhibition in physiology stands for a definite function, although there is not complete agreement as to the seat of that function. In psychology, however, the conception is used much more variously and loosely. What does inhibition mean in psychology? That is the question which the author has set himself to answer, and to illustrate by experiment.

Examining the conception of inhibition as used by a number of psychologists, it is found that there are five different senses in which "inhibition" is spoken of, and it is often used as a mere logical concept to designate all kinds of mental conflict, hesitation, and arrest. The author concludes that its use in psychology should be strictly confined to psycho-physical phenomena, whether (1) inhibition of one sensation by another; (2) inhibition of bodily movement by sensation; (3) inhi-

bition of mental state by motor actions; (4) inhibition of bodily functions by emotions; (5) inhibition of bodily movements by will. When no distinct and definite physiological activities are involved, it is held there is no true inhibition.

The experimental part of the study deals with the first and third classes of inhibition. The chief investigation deals with the phenomena of binocular rivalry, *i. e.* the manner in which two incongruous fields, when separately presented to the corresponding points of the two retinæ at the same time, tend alternately to suppress each other. It is unnecessary to summarise the elaborate experiments here described; the general result is that the phenomena of binocular rivalry are found to be both psychical and physiological, fundamentally a rivalry of discharging centres whose activity is inseparably connected with incoming sense stimuli.

A further series of experiments showed that there is marked inability to remember a series of colours when all motor movements of articulation are entirely suppressed. The author concludes that in general inhibition of the motor elements tends to inhibit consciousness, and that the condition of consciousness is the transference of the action of the stimulus into a tendency towards motor activity.

The author severely criticises the suppression of motor activity in schools, which thereby tend to become institutions for the suppression of mentality. He considers that children should be taught to *do* as well as to think, and that their motor activity should not be inhibited but directed A hesitating and ineffective bodily reaction is the accompaniment of a weakened or confused state of mind.

The Psychological Index for 1898. Compiled by HOWARD C. WARREN. London and New York: Macmillan, 1899. Pp. 173, large 8vo.

This is the fifth annual issue of an index which, either in this or in its French form as an appendix to Binet's *Année psychologique*, is almost indispensable to every psychologist and alienist. It is issued without charge to subscribers to the *Psychological Review*, and may also be purchased separately, though the price is not mentioned. There are 2558 entries in the present index, of which not less than 706 come under the heading (with appropriate sub-headings) of "abnormal and pathological." We note, as a slight flaw that might be avoided in future, that some works printed and published in England (such as Talbot's *Degeneracy*) are entered as though produced by the firm issuing them in America.

L'Année sociologique. Publiée sous la direction d'ÉMILE DURKHEIM. Deuxième année. Paris: Alcan, 1899. Pp. 596, large 8vo. Price 10 fr.

The second issue of Prof. Durkheim's sociological year-book fully maintains the high level of excellence set by the first volume, and

various new features are added. In a preface the editor defends the important place which he devotes to studies bearing on the evolution of religion; he argues with much force that in primitive stages of culture religion is a phenomenon of the first importance, and that we cannot understand innumerable facts in the life that surrounds us until we have traced them back to their beginnings in myths, legends, and rites; as a primitive fact religion is of the first importance, although as civilisation continues it more and more yields place to the social forms it has engendered. The volume is, however, by no means devoted only to the study of primitive religions; we find considerable sections devoted to, among other subjects, the recent literature of penal law, responsibility, criminal sociology, moral statistics, psychiatry, criminal anthropology, &c. It will thus be seen that the alienist may here find his own studies co-ordinated with the study of the other aspects of social life; and as Prof. Durkheim is a sociologist whose methods are truly scientific, this year-book may be warmly commended to all psychologists who are interested in the wide social bearings of their own work.

Die Konträre Sexualempfindung. Von Albert Moll. Dritte Auflage. Berlin: Fischer, 1899. Pp. 652.

This third edition of Dr. Moll's monograph on sexual inversion has been re-written and enlarged with all the care and thoroughness which mark this author's work. The book is now more than twice the length of the first edition, and the increase in size is not obtained by the easy method of throwing in new histories, although many cases have been added. Every page has been worked over afresh, and the author's knowledge of the most recent literature of his subject seems never at fault. No doubt this substantial volume contains much more than most alienists and psychologists need know concerning this subject, but for those who desire an exhaustive and judicial discussion of every aspect of sexual inversion there is now certainly no book to be placed beside this of Moll's.

The Psychology of Reasoning, based on Experimental Researches in Hypnotism. By Alfred Binet. Chicago: Open Court Publishing Co., 1899, pp. 191, 8vo. Price 3s. 6d.

This is a translation of *La Psychologie du Raisonnement*, rendered into English by Mr. A. G. White, and issued by the enterprising Open Court Company. As we reviewed the original work two years ago it is unnecessary to deal with it again, beyond repeating that it is probably the most widely interesting and the most suggestive book of an author who is deservedly regarded as the first of French experimental psychologists. We have tested the translation at various points, and

can warmly commend it; it is written in idiomatic English without any sacrifice of accuracy or lucidity. There are a few slight misprints, and since the references to French books which exist in English translations have in most cases been given to the page in the English translation, it would have been well to adopt that system uniformly. These, however, are but trifling defects.

The Good Regent: a Chronicle Play. By Sir T. Grainger Stewart, M.D., LL.D. Blackwood, 1898, demy 8vo, pp. 207.

Although there is no end to the books about Mary, Queen of Scots, and there are biographies of Knox, Lethington, and even of Bothwell, it was left for the accomplished Professor of Medicine in the University of Edinburgh to exhibit in a special work the character and history of James Stuart, the Earl of Moray, who, in truth, was a noble figure. He was a skilful general, who fought with success against the English and the French, and routed the forces of the Gordons and the Hamiltons. He was the leader of the Scottish Reformation, and during the time he was Regent he gave to Scotland order and peace, which were sadly broken by his untimely death. The book is intended to give the history of the Good Regent, and the events in which he played a part, in a dramatic form.

The author portrays Moray as a man whose love of power and desire to play a great part is kept under by a sense of duty, and who only yields to his ambition when the guilt and imprudence of his sister leaves the field open. But it is a disadvantage to depict the character of a man wholly pure and austere, and Sir Thomas excites more interest in bringing out the subtle character of Maitland of Lethington, whose change of side is explained by the influence of his wife, one of the Queen's Maries. There is much psychological analysis in the book. The only character likely to specially interest us is the Earl of Bothwell, who died mad at Braxholm Castle in Denmark. It is noteworthy that the Stuarts were almost the only royal family in Europe who never had any insane members.

The reader may safely take this book for a correct and judicious view of the events in which Moray played a part. We would fain have more space to enlarge on the beauty of the poetical descriptions.

Mortality from Consumption in Asylums for Idiots.

Dr. A. Friis, Superintendent of the Custodial Asylum for Imbeciles at Ebberödgaard, read a paper on "Tuberculosis in Danish Asylums for Idiots" to the Congress for Abnormal Schools at Copenhagen, of which we give the following extracts. After stating what is known of the frequency of phthisis, especially in the English, Scottish, and

German asylums for idiots, Dr. Friis gave some statistics of what has been noted in Denmark on this subject. From the Keller Asylums at Copenhagen particulars are only stated for the last three years: the mortality has in this time been very low, only 38 deaths in about 600 patients; of these deaths 14 were owing to tuberculosis. In Gamle Bakkehus, Copenhagen, there had been since 1853 172 deaths (number of patients increasing from two to about 200); of these 74 were owing to tuberculosis—*i. e.* an average mortality of 43 per cent. to the total number of deaths. In Ebberödgaard there have in the past six years been 148 deaths; 63 of these—42·5 per cent.—were owing to tubercular disease. Yet Dr. Friis found by post-mortem examination in Ebberödgaard tubercular deposits in 56 per cent. of the cases; Keller found them in 50 per cent. of his cases; from Gamle Bakkehus there are no specifications.

The death-rate of the two sexes was in Gamle Bakkehus 44·3 per cent for males and 40·9 per cent. for females; in Ebberödgaard 42·7 per cent. and 42·3 per cent. From the Keller Asylums no specification, according to the low number. According to age, in Ebberödgaard there are 39 deaths before and 109 after the fifteenth year. Of the first, only 10 deaths, or 25·6 per cent., were owing to tuberculosis; of the latter as many as 53, 48·6 per cent. By post-mortem examination the indications of latent tubercular disease, on the contrary, were found more frequently in children than in adults. In Gamle Bakkehus, of 90 deaths before the fifteenth year, tuberculosis was the cause in 32 cases (35·5 per cent.), while of 82 after this term 42 (52·2 per cent.) were owing to this disease. Of the adults, idiots of the lower grades and the epileptics were most affected.

In this country we now hear a good deal about the prevention of consumption, and some rather crude proposals have been published in the newspapers. Nevertheless the prevention of this malady in asylums for idiots never seems to excite any attention, even from those bound to look after such institutions. As the inmates are under complete control, and their health is much influenced by judicious hygienic and dietetic arrangements, it would be at least an interesting experiment to try whether the death-rates from phthisis could not be reduced. As far as we have noticed, the larger the mortality they exhibit the more praise these institutions get for the success of their arrangements.

Report of the Departmental Committee on Prison Dietaries, 1899.

Nothing more fully exemplifies the adage, "Times change, and we change with them," than the treatment accorded to prisoners in this country in respect to their diet. Time was, and that not so long ago, when, in addition to deprival of liberty, it was considered just and right that the unfortunate prisoner should also be subjected to a course of semi-starvation. By degrees the great psychological truth dawned on the minds of those in authority, that if you starve the physical man, the

mental and moral faculties must also suffer, and that to regenerate a criminal you must first supply his physical wants before successfully leading him to a better life. As the outcome of this change of feeling twenty years ago the dietary of the English prisoner was rearranged and improved, and now there is issued the report of a Departmental Committee on Prison Dietaries in England, which carries us still further in the same direction. The recommendations of this committee, if adopted, will provide an abundant supply of food for all classes of prisoners, and will once for all remove the reproach of a punitive dietary in the administration of prisons.

The new scales are ample, and, with a few exceptions, the constituents are well balanced, and suitable for the several classes. The addition of sweet milk to the diet of juveniles is worthy of all commendation. The committee have curtailed the antiquated system of progressive dieting. The only regret is that they had not the courage to abolish it altogether.

L'Hydrotherapie dans les maladies chroniques et les maladies nerveuses. Par Dr. BENI-BARDE e: Dr. MATERNE. Paris : G. Masson, éditeur, pp. 505. Price 8 fr.

The object of this book is to show what a useful help to treatment hydrotherapy properly applied, and carefully modified to suit various conditions, may be. The early chapters are devoted to a consideration of the physiological and thereapeutical effects of hot and cold water, and to the various mechanical contrivances for applying it; the later chapters to the treatment of a number of diseases by its means, in conjunction of course with other therapeutical measures. The impression left upon the mind after a perusal of this work is that hydrotherapy may be useful in practically every condition imaginable; it seems to us that it would gain a more patient hearing from the medical practitioner if the authors had confined themselves to an account of the good results to be derived from hydrotherapy in a limited number of conditions in which it is largely or commonly recommended, or to a mention only of those diseases in which hydrotherapy is undoubtedly and frequently beneficial. The tendency of the reader at present is to discount what may possibly be valuable information as coming from indiscreet enthusiasts, and to conclude many of the suggestions made as regards the treatment of a number of diseases or disordered conditions are given on theoretical grounds. The feeling that the authors are addicted somewhat to speculation is frequently stimulated by such vague remarks as the following: that the *reaction* after cold water applications "must be according to circumstances and indications, slow or rapid, slight or energetic; there are even cases in which it should be almost checked or avoided;" and "the *auricular douche* is given in certain affections of the membrana tympani."

Apart from this, however, there is no doubt that a mass of informa-

tion on the subject is to be obtained from the work, which is comprehensive, so that on the one hand we may find a good account of the cold bath treatment of typhoid fever, and on the other the measures to be adopted in dealing with a sprain. We do not quite see the need of including a clinical account of some of the diseases referred to (apparently in a haphazard fashion) in the course of the book, except that it helps to make it unnecessarily large.

The Extra Pharmacopœia. By W. Martindale, F.L.S., and W. Wynn Westcott, M.B. 9th edition. London: Lewis, 1898, mo., pp. 626. Price 10s. 6d.

This useful handbook has been thoroughly revised in accordance with the *British Pharmacopœia* of 1898, and maintains its authoritative position on the reference shelves of those engaged in active medical practice. Besides giving a synopsis of the changes which have become necessary since the eighth edition was published three years ago, full details are presented regarding the newer unofficial remedies. Information as to antitoxins has been brought up to date, and the Therapeutic Index now includes a list of antidotes to various poisons.

Mad Humanity: its Forms, Apparent and Obscure. By L. Forbes Winslow, M.D. Published by C. A. Pearson, Limited, London, 1898, pp. 451, with 58 illustrations. Price 7s. 6d.

This book, although dedicated to Professor Lombroso, is evidently addressed by Dr. Winslow to the general public, as it is written in the author's well-known popular style, and, as is pointed out in the preface, is shorn as bare as possible of all legal and medical considerations and technicalities. It expresses a strong opinion that insanity is progressively increasing, and that heredity and alcohol are very largely responsible for such increase.

Considering the direction in which Dr. Winslow "fires his shot," his description of the symptoms, varieties, and characteristics of insanity appears to us unnecessarily long. His views on the hereditary nature of homicidal and other insanity will lend some colour to the ha'penny hysterics of the *Daily Mail;* whilst his conviction of the rarity of mental disease amongst uncivilised nations may serve to soothe the savage breasts of Kruger and his Boers.

Dr. Winslow is rather "down upon" ladies who run upstairs and change three times before finally settling which hat to wear, though we fancy that many of the fair sex will not consider this so marked a sign of insanity as wearing the *same* hat three times running.

The chapters on handwriting of the insane and madness of genius are

interesting, full, and well put together, and the photographs illustrating the book are good and well chosen.

We consider the views expressed of the gradual progressive degeneration of the human race as unwarrantably pessimistic, and those on the ill effects of opium smoking and eating as much exaggerated. His diatribe against cigarette smoking may possibly do some good.

The author does not deal with the treatment of insanity.

A Text-book of Mental Diseases, with Special Reference to the Pathological Aspects of Insanity. By W. Bevan Lewis, L.R.C.P.Lond., M.R.C.S. Eng., Medical Director, West Riding Asylum, Wakefield. 2nd edition. London: Charles Griffin and Co., Limited, 1899, royal 8vo, pp. xxvi+609. Illustrations and charts. Price 30*s.*

We welcome the new edition of Dr. Bevan Lewis's great work, which has been enlarged, revised, and partly rewritten. New matter is mainly to be found in the division devoted to histology, in the clinical section, and in the addition of a chapter on treatment. Some fifty pages of text and a large number of plates and illustrations have been added. As formerly, the book is divided into three sections—anatomical, clinical, and pathological.

In attempting to cover the vast extent of ground mapped out by the author, it cannot but be that there are notable omissions and apparent inequalities of treatment. Since the first edition was published ten years ago, the enormous volume of research and the additional knowledge gained by workers in every civilised country render it necessary to restrict the subject-matter of a text-book to what is, in the opinion of the author, of the first importance. We assume, therefore, that the elaborate description of the cerebral cortex has limited the space at the author's disposal for a fuller description of the other parts of the encephalon. Still it is remarkable that the work of Flechsig relative to association centres finds no place in the anatomical section. We have come to regard Dr. Bevan Lewis as our authority for these anatomical details, which are pregnant with great results in the prevention and treatment of insanity. It is a disappointment that we seek in vain for his opinion on certain important questions of to-day; but we do not doubt that in fulness of time he will yet present us with his matured opinion and authoritative guidance, and that will mean a critical consideration of Flechsig's recent discoveries, with a much fuller account of cerebral physiology. Meanwhile we note that some twenty-three pages are devoted to the minute anatomy of the nerve-cells, which certainly deserve careful study, while the nerve-fibres are disposed of in four pages. In this connection we observe signs of a certain want of systematic arrangement, which renders the book difficult to use in a systematic manner. At page 62 the elementary constituents of the cortex are enumerated, and the first in order is described. Then at page 85 the author repeats his classification on other lines instead of continuing as he set out.

Passing to the clinical section, we find considerable additions from the rich experience gained by personal observation, and from the records of the Wakefield Asylum. Proof of long years of keen attention and powerful thought is manifest, and especially when the diseases discussed have a decided pathological basis, such as alcoholic insanity and general paralysis. Dr. Bevan Lewis is one of the few alienists who have used a reaction time apparatus, and we trust that his description and results will lead to further work in this direction. We would suggest that the more elaborate apparatus described by Dr. Rivers in the *Journal of Mental Science* for 1895 will be used in addition, as it affords a test in choice reaction time. We cannot refer at length to the various points of interest raised by this new edition in the clinical section. Suffice it to say that the chapter dealing with progressive systematised insanity merits careful perusal, and the chapter on treatment may be taken as summarising Dr. Bevan Lewis's methods, which are exclusive of such as assume a connection between mental derangements and visceral disturbance. But this is surely rather sweeping in view of the successful results of treatment in myxœdematous insanity for instance.

With regard to the final chapter on pathology, we find it but little changed, and must conclude that the author has not accepted more recent opinions as satisfactory. Dr. Bevan Lewis cannot but be familiar with the work done since he first presented us with his views as to the scavenger cell, which have not been generally accepted. It may be that in the turmoil of contemporary pathology, and in face of such opinions as Van Gieson's in reference to the retraction of the dendrites, he is desirous of confining himself to what he considers fixed and definite. Be that as it may, we cannot but accept the new edition of this powerful book with respect and admiration for the man who has shown that the responsibilities of everyday work in a great asylum are perfectly compatible with labours of the most exacting and tedious nature. His reward is in the results of these labours and the honour of his high professional position.

Part III.—Psychological Retrospect.

THERAPEUTIC RETROSPECT.

By Harrington Sainsbury.

Action of Peronin (Dr. Meltzer, *Therap. Monatsh.*, June, 1898).—The writer points out the importance, especially in asylum practice and in mental treatment generally, of having many strings to one's bow. We possess, it is true, many hypnotics and narcotics, but habituation, idiosyncrasy, the presence of complications of the disease,

and secondary effects of the drug will often exhaust the list of available soporifics, the symptom insomnia still persisting.

Peronin is one of the more recent substitutes for morphine; it is the hydrochloride of benzyl-morphine. Dr. M. finds the solubility of peronin much less than that stated by Munk, and he recommends the addition of alcohol to aid solution, and of saccharin to cover the bitter irritating taste. His formula is—

Peronin ...	...	...	...	2 parts.
Saccharin	...	...	...	0·5 ,,
Spirits of wine	...	...	...	100 ,,
Water ...	...	...	...	900 ,,

The alcohol percentage strength of the spirits of wine is not stated.

This solution is to be well shaken each time before administration. Of this solution 55 minims, say one drachm, will contain $\frac{1}{10}$ gr. of peronin. Whatever the dose taken, further dilution with water will make it more palatable, and will complete the solution of the drug.

Patients were selected, generally paralytics, whose attacks of excitement and insomnia could, as a rule, be reckoned upon to last several days. The dosage was started at $\frac{1}{4}$—$\frac{1}{3}$ grain of peronin, this quantity never causing unpleasant effects, thence it was gradually advanced up to 1·5 grs.

Forty-five administrations of peronin in the case of five patients gave a successful result in 70 per cent. of the trials. The same five patients treated with other hypnotics, viz. paraldehyde 60—150 grs., amylene hydrate 60—75 grs., chloral hydrate 30—45 grs., sulphonal 30 grs., trional 30 grs., gave 64 per cent. of successes. Sleep began with peronin in from a quarter to one hour, and it lasted from two to eight hours; the other hypnotics acted in about the same time, and gave about the same duration of sleep.

Combinations of the above-named hypnotics with $\frac{1}{3}$ gr. of morphia were compared with combinations of the same hypnotics with $\frac{2}{3}$ gr. of peronin, the latter giving decidedly better results.

In one patient only did peronin cause thirst, and in one instance only was there a moderate sweating.

Peronin administered *by day* to *five* patients, paralytics, but *not in the stage of excitement, and not suffering from want of sleep*, showed some hypnotic power, but far less than in the foregoing series, and decidedly less than the case of the other group of hypnotics. Dr. M. found that in a series of experiments upon himself peronin had very much the same effect as morphine, but he found that it had fewer disagreeable after-effects. He thinks that there is little danger of peroninism, because the effects pass off so much more quickly than those of morphine; this he interprets as showing correspondingly rapid elimination.

As to the effects of peronin on pain, he brings forward no evidence, though in two cases an unpleasant itching was removed. Upon the pupil he noticed a distinct contraction effect in the experiments upon himself (his paralytic patients had immobile pupils).

Peronin is not adapted for hypodermic use because of its insolubility. It is a costly remedy, though not dearer than trional and amylene hydrate.

The effective dose of peronin ranges between $\frac{2}{3}$ gr. and 1·5 grs.

Reference to the literature of peronin is given, *e.g.* to the observations of Schröder, Nowack, Eberson, Munk, and v. Mering-Halle.

Heroin: on the Pharmacology of some Morphine Derivatives, and on the Clinical Value of Heroin (Drs. Dreser and Floret, *Therap. Monatsh.*, September, 1898).—Codeine, as we know, is a morphine derivative; it is, viz., methyl morphine. Heroin, the new derivative, is a substitution product by the replacement of the two hydrogen atoms of the hydroxyl groupings of morphia by two groupings of acetyle. This compound Dr. Dreser investigates pharmacologically, and he concludes that it possesses a decidedly greater sedative action upon the respiration than codeine, reducing the frequency though at the same time increasing the depth of the inspiration and the volume of inspired air. Coincidently heroin reduces the oxygen consumption in the body, in particular by quieting muscular action throughout the body. The effective dose of heroin was found to be about 0·001 gramme ($\frac{1}{60}$ grain), whereas that of codeine was about 0·01 gramme ($\frac{1}{6}$ grain); and inasmuch as the lethal dose of each is about the same, it follows that we have a much safer drug in the new derivative.

Dionin, or the hydrochlorate of morphia-ethyl-ether, another derivative, has the advantage over peronin and heroin of a much greater solubility. It dissolves, viz., in water in the proportion of one to seven. Professor v. Mering speaks highly of it as a means of checking a disturbing cough and inducing quiet sleep, surpassing codeine in these actions. For the discussion of the whole subject of these newer morphine derivatives see v. Mering's article in *Merck's Report* for 1898 (published 1899).

Pyramidon in Nerve Affections (Dr. Rudolf Laudenheimer, *Therap. Monatsh.*, April, 1898).—Dr. Laudenheimer reports his experience during some twelve months with this antipyrin derivative, which Filehne introduced into practice. Observations on upwards of a hundred patients were made, and the outcome of these observations is that pyramidon must be regarded as a really serviceable antineuralgic, effective in smaller dose than antipyrin or migrainin, and relatively to these a safe remedy. Dr. L. estimates that 6 grs. of pyramidon are equivalent in effect to about 15 grs. of antipyrin. His dosage varied between 4 and 12 grs. administered thrice daily, but at times this dosage would fail when a single massive dose of 15—20 grs. proved effectual,—as, for instance, in a case of severe supra-orbital neuralgia. Headaches, generally of widely different origin, were much benefited by the drug, *e.g.* the headaches of convalescence from certain psychoses, those of the chronic alcoholic, two cases of headache in chorea chronica, three of cerebral tumour, certain cases of neurasthenic head pain, &c. Neurasthenia, however, did not in general offer a favourable field for its employment

The effect of the drug seldom manifested itself before half an hour, and sometimes it would delay 1—2 hours

The gastric crises of tabes, said to be benefited by pyramidon, did not yield very decidedly to the drug in Dr. L.'s hands, but in one case the lancinating pains of the disease were greatly lessened by it.

Upon states of mental excitement in insanity no action was observed; no serious by-effects or after-effects were noted.

The Therapeutic Value of Recent Synthetic Analgesics (discussion opened by Dr. Ralph Stockman at the British Medical Meeting—see *British Medical Journal*, October 8th, 1898).—It is useful, indeed essential, that at intervals we should take stock of our therapeutic armamentarium, and it is the more needful in present days because of the rising tide of new remedies; hence the usefulness of these discussions. Whether much benefit results from the academic treatment of the subjects by the development of long series of rational formulæ in demonstration of the kinship between this and that group of synthetic remedies is perhaps open to doubt, but the temptation to do so is too great to be foregone. Dr. Stockman handles this part of his subject ably, and in discussing the ideal analgesic he suggestively argues that we can hardly expect to possess ourselves of that drug which shall alone dull either the pain receiving or conducting elements, and leave all other parts of the nervous system unaffected. For this very benumbing or depressing action, for which we select the drug, is more than likely to exert some depressing action on other but closely related or associated nervous structures. Hence, since we all differ more or less in our susceptibilities, we may expect to find individuals who, along with the desired effect, shall exhibit depressant respiratory, cardiac, and vaso-motor effects very far from desirable. The most he thinks we can do here is to diminish the margin of risk by employing drugs not too potent in their effects, or by a more careful ranging of the dose, and by a gauging of the susceptibility by a minimal dosage at the start.

Dr. Stockman thinks more seriously of the attendant risk from blood deterioration which obtains for many of these remedies, and he makes such danger more crucial in accepting or rejecting a drug. For this reason, and also because it is so easy to overstep the safe limits of the dose, he rejects acetanilid (antifebrin). Antipyrin he thinks very efficient and comparatively safe, but to phenacetin he gives the palm. Lactophenin, which in composition is closely allied, he places almost upon an equal footing.

Dr. C. D. F. Phillips, who followed in the discussion, thought that with very few exceptions it was doubtful whether the more recent synthetic products could rival the original analgesics, viz. antipyrin, antifebrin, phenacetin, and exalgin. The few exceptions to which he referred were salophen, phenocoll hydrochloride, apolysin, and methylene blue; the first he thought of exceptional promise.

Dr. Lockhart Gillespie advocated the addition of caffeine to such analgesics as antipyrin. He spoke well of migrainin as an analgesic which did not depress the heart.

Dr. Hamilton agreed as to the value of combining caffeine with antipyrin.

Dr. Leech considered that antipyrin and phenacetin were the best analgesics.

Dr. William Gordon and Dr. Frew both spoke to the value of antifebrin in carefully regulated dose.

Dr. Affleck saw fewer ill effects from phenacetin than from any other of these drugs.

Sulphonal Poisoning, Susceptibility of Women to (*Wiener klinische*

Wochenschrift, June 9th, 1898).—Dr. Pollitz, in an article in the *Vierteljahresschrift für Gerichtliche Medicin*, vol. xv, No. 2, records a case of prolonged sulphonal use in a woman. The doses were not excessive, 22 grs. at the outset, 15 grs. subsequently, these being the total daily administration. The drug was continued for over a year, with, however, frequent intermissions, occasionally for weeks. Loss of appetite, constipation, and marasmus led up to death; the urine was characteristically affected. The autopsy showed extensive disease of the secreting cells of the kidney. The interest of the communication lies in the reference which Pollitz makes to the relative frequency of sulphonal poisoning in women. Of 21 fatal cases selected by Schulz 20 occurred in women.

The Treatment of Epilepsy with Bromalin (Dr. Rohrmann, of Göttingen, *Monatsschrift für Psychiatrie u. Neurologie*, December, 1898).—The position of bromide of potassium is first accepted as the most potent remedy against epilepsy up to the present time. Its drawbacks are then enumerated; these are many, and in spite of various adjuvants, *e.g.* arsenic, aperients, and diuretics, they are frequently not to be avoided. The replacement of potassium by sodium and ammonium gives, according to the author, less active medicines. The combined use of opium and potassium bromide after the method of Flechsig is of doubtful advantage, and in many cases does not avoid an ultimate prolonged course of the bromide alone.

The question of operation, permissible in the Jacksonian type, is to be negatived unhesitatingly in the genuine idiopathic form; its results have been almost without exception fruitless.

Impurities in the sample of bromide, the presence of hydric bromate and of iodine, also of potassium chloride, may account for the undesirable by-effects in some cases, but in the majority of cases these must be put down to the bromide of potassium, and to it alone.

Féré's method of conducting a bromide course is certainly a step in the right direction; finding that frequent bathing and the combined use of arsenic were ineffectual in correcting the bromism, and having recognised that constipation and flatulent distension were often present, he sought in the bromism the consequence of auto-intoxication, and by the administration of β-naphthol and bismuth salicylate obtained certain striking results, viz. the disappearance of the tremblings, of the rash, and the digestive disturbances, the improvement of the appetite, and of the general sense of well-being. Féré gave daily, in two doses, 60 grs. of naphthol and 30 grs. of bismuth salicylate.

Bardet went a step further, and combined the antiseptic with the bromide in one dose. The salt chosen by him was bromethylformin, a compound with formula $C_6H_{12}N_4,C_2H_5Br$, which may be regarded as a combination of the base formin, $C_6H_{12}N_4$, with bromide of ethyl, C_2H_5Br. This compound has been re-named bromalin by E. Merck; it is crystalline, readily soluble in water, and readily decomposed by weak alkaline solutions into bromide of the alkali and formaldehyde, a powerful antiseptic. Bardet's experiments on animals and observations on man have proved the drug to be an excellent sedative. Féré tried it in four cases of epilepsy, and found that it could be given in a much larger dose than potassium bromide with equal effect, and with much less

likelihood of the occurrence of bromism. Laqueur employed it in seven cases of epilepsy with satisfactory results, recording that in double the dose of the potassium salt it was as effective as the latter without the unpleasant by-effects. With regard to the amount of *bromine* present in bromalin and the bromides he states as follows:

Potassium bromide	67·2 per cent.
Sodium bromide	77·67 ,,
Ammonium bromide	81·62 ,,
Bromalin	32·13 ,,

Other observers, among them Boehme, have recorded similar results, in particular the absence or diminution of bromism.

Rohrman then gives his own observations on five epileptics, and thus sums up his experience:—Bromalin is an efficient anti-epileptic remedy; it will not increase, and may lessen the symptoms of bromism already produced by a course of bromide of potassium; there is no fear of harm to kidneys or heart. He thinks it has a large sphere of usefulness before it, especially in those cases which have resisted the potassium salt, or in which severe bromism has followed the use of the latter.

Merck recommends the following formulæ for the administration of bromalin:

For adults.—Bromalin in powders each of 30 grains, administered in wafer-paper, dose 1—4 or more daily.

For children.—Bromalin 10 parts, distilled water 10 parts, syrup of orange peel 90 parts; of this a teaspoonful once or twice daily.

The Non-medical Treatment of Epilepsy (Dr. Hurd, *Bulletin of the Johns Hopkins Hospital*, December, 1898).—The writer refers to the often unsatisfactory treatment of epileptics by drugs alone, as well as to the failure of operative procedures in the majority of instances. He points to the variety of the causal conditions which appear to underlie the epileptic attack. He states that recent observations indicate that a disordered metabolism is present in many cases, and he suggests that poisonous bodies, perhaps leucomaines, acting upon an ill-balanced nervous system, bring about the convulsive seizure. It is not necessary to follow the theoretical side of Dr. Hurd's communication; more important are the facts of treatment. These are the provision made in many of the States of America for the care of epileptics in large colonies, and the treatment of the patients by the largest possible allowance of open-air life, with control of the diet so as to regulate in particular the amount of nitrogenous food supplied; further, the prescription of a judicious amount of labour and of occupation. As a result of such treatment he states that patients who have been subject to daily or weekly seizures will often, without any medicine, go a month, sometimes a year or longer, without a convulsion.

It would be interesting to have definite statistics as to the time during which this treatment has been in operation, and the number and nature of the cases so treated.

Contribution towards the Treatment of Somnambulism, by Dr. T. Hirschkson (*Therapeutische Monatsh.*, May, 1898).—The writer records his experience of galvanisation of the medulla oblongata in two cases of very pronounced sleep-walking. He was led to the treatment by the observation on a former occasion of the effects of this treatment upon a

hystero-epileptic case suffering from slight sympathetic palsy. The galvanisation in this case was directed to the cure of the palsy, but to Dr. Hirschkson's astonishment the peculiar postural attacks of the hystero-epileptic seizures yielded rapidly to the treatment. Dr. Hirschkson regards somnambulism as essentially hysterical, at least so far as the subjects are concerned, and remembrance of the case just cited led him to apply the same treatment to his case of sleep-walking, with excellent results.

On the Nutrition Value of a New Albumen Preparation, "Tropon" (Dr. H. Strauss, *Therap. Monatsh.*, May, 1898).—Every department of practice recognises the importance of treatment directed towards the alimentation of the sick, none more so than psychological practice. For this reason we shall welcome any new food preparation which combines a high nutrition value with palatability and easy digestion. Dr. Strauss has tested very carefully the value of "tropon," an artificial albumen preparation obtained from the factory of Mülheim, on the Rhine. In particular he has kept in view its acceptability to the patient—a practical point of primary importance, as has been found in respect of such preparations as carne pura, Mosquera's beef meal, patent meat powder, Norwegian fish powder, &c., which in the long run are apt to excite more or less loathing.

Tropon is a fine powder, meal-like in consistence, and of grey-brown colour; it is almost entirely free from smell and taste. It purports to consist of 90 to 97 per cent. albumen, 0·5 to 1 per cent. ash, and traces up to 0·8 per cent. of ethereal extractive; it is insoluble in water. In respect of price it compares exceedingly well with the other albuminous foods already in the market; thus, whereas—

1 kg. (2·2 lbs.) of albumen as eucasein costs about 11 shillings,

,,	nutrose	,,	20	,,
,,	pepton (Merck)	,,	21	,,
,,	pepton (Antweiler)	,,	40	,,
,,	somatose	,,	50	,,
,,	pepton (Kemmerich)	,,	61	,,

1 kilogramme of tropon costs 4 shillings.

Recent observation seems to indicate that the solubility or insolubility of an albumen preparation affects but little its assimilability by the alimentary tract; and further, that even in cases of almost complete arrest of the gastric juice (achylia, apepsia gastrica) the bowel can deal adequately with and absorb the proteid group.

Tropon was tested upon a series of cases of damaged or deranged mucous membrane, the result of the action of caustics, of inflammation, ulceration, &c., as well as upon a number of cases of feeble digestion in convalescents. It was administered as a rule suspended in lukewarm milk, this being generally preferred to its suspension in bouillon. It was also given in thickened soups, in chocolate, and in cocoa, and, if there were no need to spare the mucous membrane mechanically, in mashed potato, boiled rice, with vegetables, or even in the form of biscuits or "zwieback," specially prepared with tropon flour. In these various forms it was generally well taken, complaint being rarely made of grittiness or of a taste of fish. The food was administered in some cases for periods of several months.

Dose.—One tablespoonful of tropon to the half-litre (rather less than one pint) of milk was found best suited, either simply stirred in or boiled with the milk. Twenty to sixty grammes were administered *pro die*, *i.e.* rather over one half to two ounces, without causing any disturbance of the appetite or other signs of irritation.

Three experiments, in which careful estimation of the nitrogen exchange was made, indicated that the assimilation of tropon was more complete than of the albumens of foodstuffs. The fine state of subdivision of the albumen of tropon will probably explain this. In two of these experiments the elimination of nitrogen as uric acid was found to diminish during the period of tropon administration—an important observation, should it be confirmed, as showing its suitability as a food in certain states, *e.g.* gout, gravel. These observations invite a serious trial of tropon in cases of malnutrition.

The Glycerophosphates as Nutrition Stimulants, in particular as Nerve Nutrients (*Merck's Digest*, No. 1, 1899).—Phosphorus and its compounds have long been regarded as stimulators of metabolism generally, of nerve nutrition more particularly. Whether all that is said is deserved is another thing, but that some decided powers do belong to phosphorus combinations must be conceded. We are accustomed to look for greater activity among the unsaturated groupings, *e.g.* the hypophosphites, than among the satuated salts, *e.g.* the phosphates; but for certain of the latter, viz. the glycerophosphates, a high degree of potency is claimed. The hydrogen salt, glycerophosphoric acid, $C_3H_5(OH)_2(PO_4H_2)$, is not used in medicine, but the ammonium, potassium, sodium, lithium, calcium, magnesium, iron, and quinine salts are all employed therapeutically. The indication for these salts is said to be each and every form of depressed nerve function; thus they are given in simple convalescence from acute illness, in Addison's disease, certain forms of sciatica, neurasthenia, &c. &c. Prof. A. Robin, who brought these salts into prominence, states that they increase nitrogenous metabolism chiefly, but sulphur metabolism to some extent, and further that they diminish the disintegration of nerve tissue. He administers the salt both by the mouth and subcutaneously; by the mouth he gives the glycerophosphates (in the form of cachets, pills, and syrups) in the dose of five to fifteen grains of the sodium, calcium, and magnesium salts; this stands for the *daily* dose. The iron salt he gives in two to five grain dose (per diem). He frequently combines strychnine or kola with the phosphates; the dose of the latter is given preferably with food. Robin's original observations date back some years, but more recently (1897) he urges again their claims, and particularly in sciatica.

Other observers, both in America and France, speak highly of the use of these combinations in sciatica, in Graves' disease, in hysteria, and various forms of debility and malnutrition.

The Abuse of Strychnine as a Stimulant (*Therapeutic Gazette*, May 16th, 1898).—In a leading article the above subject is dealt with, and attention called to the over-use of strychnine and nux vomica. The writer admits to the full the value of the drug as a temporary stimulant which will assist in a crisis, but he warns against the long continuance of the administration. Long before the development of any twitching of the muscles of the forearm, or of stiffness at the nape of the neck, a

condition described as explosive nervousness is or may be produced. Such patient may suffer from "fearful thoughts" and distressing apprehension of coming evil. Cessation of the drug brings about cessation of the symptoms. It is suggested that another symptom of over-stimulation is fever—witnessed in particular in the convalescent from typhoid. The article is too sketchy, but it should nevertheless serve to point a danger and make us wary. General experience will probably grant that in moderate dose both nux vomica and strychnine may be persisted in for long periods with benefit, but in ascending dosage, and indeed in any case, the action should be carefully watched. A stimulant should be essentially of temporary use, but only too often is it continued unnecessarily and harmfully through carelessness or neglect. This leading article concerns every department of medical practice.

The Use of Strychnine in Alcoholism (*Therapeutic Gazette*, November 15th, 1898).—Federoff (*Revue de Thérapeutique médico-chirurgicale*, June 1st, 1898) records twelve cases of beneficial action from strychnine in alcoholism. Strychnine moderates the catarrhal condition of the alimentary tract, and controls the neurasthenic symptoms, in particular the sleeplessness, so difficult to treat. The nervous restlessness of the alcoholic disappeared under the influence of the drug.

On the Value of Potassium Permanganate as an Antidote to Morphia Poisoning.—Messrs. Thornton and Ch. Holder have tested the statement made by Moor and others that potassium permanganate acts as an antidote to morphia even when injected beneath the skin. Their experiments upon dogs give a direct negative to this statement (*Therap. Monatshefte*, November, 1898; from *Therapeutic Gazette*, January, 1898).

The antidotal value of the permanganate when administered by the mouth is of course well established, and by direct experiment it may be shown that a fatal dose of morphia may be taken harmlessly if followed immediately by a few grains of potassium permanganate dissolved in water.

ITALIAN RETROSPECT.

By W. Ford Robertson, M.D.

The Use of Lactophenin as an Hypnotic.—Christiani (*Il Manicomio moderno*, 1898, No. 2) has recently very strongly advocated the use of lactophenin as an hypnotic in the sleeplessness of the insane. Although his paper has already been noticed in this country (see *Brit. Med. Journ.*, 1898, vol. ii, Epitome, par. 448), in view of the probable importance of the subject, and the fact that the alleged therapeutic value of the drug has received strong confirmation from the experiments of Namirez (*Brit. Med. Journ.*, 1899, vol. i, Epitome, par. 128), it may perhaps be useful to give an account of his observations here. He states that he has used lactophenin as an hypnotic in over two hundred cases of insanity, including practically all its various forms. He

administered it in doses of from two to three grammes suspended in sweetened mucilage, one hour after supper. He concludes that the drug has an hypnotic action which is certain, rapid, intense, prolonged, and free from any danger. This action manifests itself in from half an hour to one hour after administration. The sleep induced resembles natural sleep. It is profound, quiet, and restorative, lasting generally from four to nine hours. Return to consciousness is not accompanied by any sensory, motor, or gastro-intestinal disturbances. The drug has no cumulative action. Its prolonged use does not give rise to inconvenience of any kind. In one case of general paralysis its administration was followed by jaundice, which, however, he thinks may have been due to some other cause. He has not found any contra-indication to its use in the existence of morbid physical conditions in the insane, such as nephritis, cardiac disease, senility, pneumonia, &c. It may be given in any form of mental disease. In some instances it has failed, chiefly in cases of severe delirium. Like other hypnotics, it tends in many cases to gradually lose its effect. He believes that lactophenin is the hypnotic *par excellence* in insomnia of the insane accompanied by serious involvement of the physical health.

The Treatment of Acute Delirium by Washing out of the Stomach.—Dr. A. Marro, of Turin, the author of the important series of articles upon puberty which has recently appeared in the *Annali di Freniatria*, contributes to that journal (1898, f. 4) an interesting paper upon the cure of acute delirium by washing out of the stomach. He describes observations upon twelve cases, only five of which, however, presented the features of what he regards as acute delirium properly so called, namely, rapid onset of the disease, elevation of temperature, profound mental confusion with terrifying hallucinations, and general muscular twitchings. In all of these five cases the treatment was followed by rapid improvement in the mental condition, while of the remaining seven cases four recovered and three terminated fatally. He considers that these results not only furnish evidence of the high therapeutic value of repeated washing out of the stomach in acute delirium, but also contribute to our knowledge of the ætiology of the disease, since they demonstrate that the stomach may be the seat of the generation of the toxines, which when absorbed are capable of provoking the morbid phenomena of acute delirium. He regards his observations as bearing out the view of Ceni that this disease is the result of auto-intoxication by certain common pathogenic organisms.

Interpretation of Donaggio's Reticulum in the Nerve-cell Protoplasm — A. Donaggio (*Rivista sperimentale di Freniatria*, 1898, f. iii-iv) has made a further communication regarding the reticular figure demonstrated in certain nerve-cells by his modification of Ehrlich's methylene blue method (see *Journal of Mental Science*, 1899, p. 404). He now regards it as identical with the achromatic reticulum of the cytoplasm. He finds that the threads of the network are most brightly coloured in those portions of the cell in which the chromophile substance is known to be most abundant, and that these brightly coloured threads present a granular surface, while in some cells there can be observed an initial formation of chromatic particles or Nissl-bodies. On the ground of these observations he concludes that in the living state the chromatic

substance is disposed in the form of granules on the threads of the achromatic reticulum, and not in that of the larger aggregations which constitute the Nissl-bodies. It is on account of this disposition of these granules that his method, which does not alter their normal arrangement, reveals the achromatic reticulum both in the cell body and in the larger protoplasmic branches. It will be seen that this view of the arrangement of the chromatic substance of the protoplasm is very similar to that of van Gehuchten, who has maintained that the Nissl-bodies are essentially constituted by a granular incrustation upon the achromatic fibrils.

Changes in the Nerve-cells of the Cœliac and Mesenteric Ganglia during Digestion.—G. B. Pellizzi (*Annali di Freniatria*, 1898, f. 4) has made a series of observations upon the changes in the nerve-cells of the cœliac and superior mesenteric ganglia of the dog at different stages of digestion. He finds that the chromatic particles of the protoplasm become entirely or partially consumed with greater or less rapidity when these nerve-cells exhibit their functional activity, and that they are gradually formed again when this activity ceases. The process of reintegration is associated with certain changes in the nucleus. The results of this investigation probably constitute the most important evidence that has yet been obtained in confirmation of the much-disputed conclusion of Mann, formulated in 1894, that the chromatic substance is stored up in the protoplasm of the nerve-cell during rest, and consumed during functional activity.

ALCOHOLISM AND ALLIED NEUROSES.

By G. R. Wilson, M.D.

Three years' numbers of the *Journal of Inebriety* contain contributions which may well be repeated in summary form, and brought before readers of the Journal.

Alcoholic Neuroses.—Dr. Howard, Baltimore, contributes a short article on "Alcoholic Maniacal Epilepsy" (July, 1897). He properly emphasises the importance of *petit mal* in alcoholism. Distinction must be drawn between the "drunken stare" which persists during consciousness, and which may accompany conversation, and the "epileptic stare," which is sharp, sudden, with fixation of the oculi-motor organs, and which ceases with a return to consciousness. The minor attacks may last only a few seconds, may be accompanied by the sudden grasping of an object near at hand, but are compatible with the erect attitude and may pass unnoticed. Such attacks are common, and many of them may precede a violent epileptic *furor*—"a period of anger preceded by a calm attitude; then comes the sudden period of ferocity during which the deed is done; almost immediate subsidence of the furor, followed by partial or complete ignorance of the act."

"*Epilepsia Alkoholika*" (January, 1898, Dr. Stern, New York.)—As in Dr. Howard's paper, it is assumed that alcoholism "causes" epilepsy.

That may be,—"(1) loss of consciousness with tonic-clonic convulsions of one or more muscles or of the whole body—*grand mal.* (2) Loss of consciousness without, or with only very slight convulsive movements—*petit mal.* (3) Certain phenomena acting as equivalents to the typical symptoms—epileptic equivalent." Such epilepsy is considered as—"(1) *Symptomatic epilepsy.*—(*a*) Epilepsy caused by anatomical changes—molecular epilepsy. (*b*) Epilepsy caused by toxic influences—toxic epilepsy. (2) *Idiopathic epilepsy*, epilepsy not traceable to anatomical sub-states of pathological changes or to toxic influences." This last is attributed to vaso-motor disturbance, an irritability of the vaso-motor centre in the medulla, and probably in the cortex cerebri. (But why not "molecular"?)

The interest of the paper attaches chiefly to its chemical considerations. Dr. Stern is convinced that epilepsy is most usually toxic. An interesting case quoted revealed repeatedly the presence of acetone and diacetic acid in the urine.

Dipsomania (Dr. Howard, Baltimore, July, 1898).—In this paper a much-needed discrimination in the use of the term dipsomania is insisted on. Dr. Howard's conception of dipsomania is very important. In dipsomania there is no habitual drunkenness. Contrary to all habit and usual character, the patient drinks to great excess as the result of an attack of restlessness and specific craving. Such an attack usually lasts about three weeks. Subsidence is often sudden, and followed by considerable forgetfulness and "psychical contentment." The incidence of the attack is marked by insomnia, anorexia, and often vomiting if food is attempted, "precordial anxiety," great dread, and a hurried pulse. If secluded the patient may drink huge quantities of water, yet void only a little highly phosphatic urine. The throat is parched, the skin hot and dry; then comes the frenzied desire for alcohol. Convalescence may be much more prolonged and much less happy in patients who have been prevented taking alcohol. When the "nerve-storm is over" alcohol in any form is repugnant.

"Alcoholism never leads to true dipsomania, although alcoholism and pseudo-dipsomania are allied. . . . The pseudo-dipsomaniac is an intermittent drunkard. He will drink to excess whenever opportunity occurs."

Cases are cited, and the subject ably discussed, but even here is a great confusion as to terms. In this paper we are told that "the conditions existing in dipsomania are so different from those in inebriety." But in his former paper, following Norman Kerr's lead, he tells us "inebriety is . . . an intoxication mania of such furor, intensity, and force." Norman Kerr says "inebriety is an overpowering morbid impulse, crave, or craze, which tends to drive certain individuals to excess in intoxicants." Obviously in his later paper Dr. Howard means inebriety in its classical sense—a morbid alcoholic habit. That is a condition clearly to be distinguished from the epileptic onset of dipsomania.

Dr. Agnes Sparks, on *Alcoholism in Women*, October, 1898, gives expression to opinions which seem to the present writer very sound in a comparison of the disease in men and in women. Dr. Sparks finds that in women heredity is less important and somatic conditions more

important, notably some kind of neurasthenia, and the distress incident to disorders and crises of the reproductive organs; that vicious fondness for alcohol is rare, that the disease is slower, that ovulation is not so commonly suspended as in morphinism, that dementia is rarer than in men, and periodicity more marked; that prognosis is better. The most valuable therapeutic agents in Dr. Sparks' repertoire are confidence, "gastro-alvine" remedies, abrupt withdrawal of alcohol, strychnine, arsenic, electricity, and hypnotism. Treatment must be very prolonged.

Dr. Herter contributes to the April number, 1897, a very interesting case of *acute alcoholic intoxication* in a child aged three years. The boy swallowed twelve ounces of whisky in the afternoon, fell to the floor, was stuporose for thirteen hours, and had a convulsion the following morning. Up to that time there was no paresis. The boy was admitted to hospital three weeks later, on December 13th. The following is a summary of the case:

December 13th.—Loss of sensation and of some power in arms; left leg spastic, the great toe nearly at right angles; right patellar reflex gone, the left slight; urination difficult; right kidney enlarged. 14th.—Vomiting; stupor; pulse 160, fairly good; slight vertical nystagmus; slight rigidity of neck; feet dropped; knee-jerks gone; convulsion, beginning in right arm and face. 15th.—Constant drowsiness; slight rigidity of right hand and forearm. 16th.—Three slight convulsions like the last; marked general rigidity, especially on left side; neck slightly stiff; swallowing difficult. 23rd.—Severe convulsion; left leg has become acutely flexed on thigh; right foot extremely extended; some fibrillary twitching of tongue, and tremor of left side of body; head rolling. 24th.—Tremor; conjugate deviation of eyes to the right; miliary eruption on skin. 25th.—Repeated convulsions. 26th.—*Tache cérébrale* pronounced. 28th.—Hypostatic pneumonia.

January 8th.—Stupor; right arm paralysed; right leg weak; left leg in extreme contracture; left hand in bird-claw position. 11th.—Eyes examined show no *optic neuritis*. 23rd.—Mental state improved; contractures continue; wasting muscles tender; head still rolling; complete consolidation of lower lobe of right lung. 30th.—Some purulent discharge from right ear.

February 3rd.—Condition bad; 4 lbs. 4 oz. weight lost; weakness and pallor; contractures and atrophy; no strabismus. 6th.—Left leg and thigh give no response to strong faradism, nor the abdominal muscles, nor the left biceps. Most of the other muscles react only slightly, the neck and the right interossei well. Under galvanism the C.C. contraction is greater in all muscles of extremities than the A.C.C.

March 2nd.—5 lbs. 12 oz. lost; contractions less; muscular power returning. 18th.—Speech returning.

April 6th.—Hands mobile; lower limbs mobile in bed. 28th.—Apparently entirely recovered.

There was irregular fever, not very high, from December 13th till February 7th, 1896. Dr. Herter, assuming a multiple neuritis, does not think it necessary to assume a meningitis to account for the cerebral symptoms, which he attributes to probable vascular and cellular lesions in the cortex. There is no mention of treatment.

Dr. Kinney (January, 1896) reports a case in which there occurred some most interesting symptoms (first described, I think, by Magnan)—*pseudo-intoxication* in a man who had not been recently drinking. The case was distinctly alcoholic, but abstemious of late. On receipt of the news of a calamity he became drunk on emotion, and the interesting point is that he became not rowdy, but staggering and stammering, with a temporary sottish appearance. The condition lasted half an hour.

Another case, not of alcoholism, showed a prolonged trance-state with excitement and irritability, ending instantaneously and followed by complete forgetfulness of the excited period.

A third case is one of somnocyclism (cycling in sleep). The patient, asleep, sometimes in cycling costume, and sometimes in an undershirt or less, got up, mounted his wheel, and rode about town and in the country. He generally awoke from a fall. On one occasion it was at the foot of a hill, his head on the edge of a pond, and his wheel about thirty feet distant. Another night he found himself suspended by his shirt on a pear tree in his father's garden. It is not known whether he had descended thither from the roof or was trying to ascend. At other times he would go to his office and work. Once, having stuck over a balance in the afternoon, he found next morning that he had completed it, correcting an error previously not observed. There is no subsequent recollection of what has transpired. He has been observed in hospital to hold a conversation through an imaginary telephone, and, again, to sit atop a wardrobe with an umbrella up over him. Evidently this man's disease included a sense of humour. Later, while under treatment, his chair collapsed, and he fell backwards, striking his head. Thereupon he promptly fell asleep. During his convalescence he discovered that music, of which he had been very fond, had become impossible for him, inducing great distress. The patient's trouble began after excessive cycling in heat. Recovery was chiefly attributed to doses of *natrum muriaticum*, "which was given in the thirtieth potency every three hours."

The last case is one of abeyance of speech for seven weeks after a fall on the head, with survival of reading and writing, coherence, occasional violence, and much headache. In the midst of a severe headache, with face flushed and pupils dilated, speech suddenly returned. From that instant he was again consecutively conscious, but there remained the hiatus of seven weeks of which no recollection was possible.

The *fundus oculi in delirium tremens* is reported upon by Dr. Davis (April, 1896). Of sixteen cases eight were delirium tremens proper, the other eight "acute drunks." The paper is important because records of such examinations are rare. The result of it is to establish the prevalence of vascular changes, enlarged and tortuous vessels in the fundus, often with pulsation in the veins. Even when these facts are not noted congestion is common. Dr. Davis suggests the importance of these factors in the ætiology of visual hallucinations.

GENERAL RETROSPECT.

By J. R. Lord, M.B.

The Use of Strontium Bromide in Epilepsy.—In the *Lancet* of October 15th, 1898, Professor A. Roche (Dublin) continues his account of his treatment of epilepsy by the use of strontium bromide. Some cases he considers as cured, since there has been no recurrence of fits for periods varying from two to four years. He cannot say as yet whether the recovery can be called permanent. Its use always diminishes the fits, and any failure there has been he puts down to his directions not being carried out properly. His routine practice is to start with half-drachm doses night and morning, given with a bitter infusion, which are gradually increased. For full benefit it is necessary to continue the drug over a long period of time. He has never found it to result in any bad consequences, and has given it in drachm doses daily without intermission for three years, and three drachms daily for weeks without any untoward incident occurring. It does not appear to have any constitutional symptoms like potassium or sodium salts, and can be given in larger doses and for a greater period of time than the latter. He quotes Dixon Mann, who remarks that strontium salts cannot be considered as poisonous. Dr. Lochart Gillespie, who has given strontium salts in the treatment of exophthalmic goitre in children (*Brit. Med. Journ.*, Oct., 1898), holds the same views. The use of salicyclate of strontium in rheumatism is to be strongly recommended on the same grounds. In no case, as far as one knows, has the use of iodide or bromide of strontium ever produced a rash. Germain Sec has found the bromide salt of benefit in dyspepsia. This would make it particularly suitable in epilepsy. It ought to be remembered that the bromide salt is deliquescent, and therefore ought not to be prescribed in powder.

Colour Hearing.—Dr. Colman (London) gives some further remarks on this subject in the *Lancet*, January, 1898. Since his last communication in 1894 he has been able to investigate a number of additional cases. He has no reason to alter his opinions previously expressed as to the nature of the phenomena, viz. that they are "associated sensations" analogous to the cutaneous sensations of shivering, which is experienced at the sight or thought of an accident or at the sound of the squeak of a slate pencil. In this we cannot agree with him, for reasons which will be presently stated. The subjects are more frequently males than females, and the degree of education has no effect on the proportion affected. It is difficult to obtain any light as to the origin of the phenomenon, which nearly always dates back to early childhood. It has been found not to be due to the child learning the alphabet from coloured letters, cases being given in support of this. It has been found in all the members of one family, and to be in some cases inherited.

The tints excited are definite and characteristic, each for its own sound; they do not vary as time goes on, and are scarcely ever the same in two individuals. The colours are produced subjectively by the

hearing of certain words or sounds, and also by the thought of words. The phenomenon cannot depend upon any physical relationship between sound and colour, as has been supposed, because the same colour is not as a rule produced by the same word except in the one individual. The process is an individual and psychical one—a statement with which we entirely agree. Allied sensations may occur in subjects who do not at other times experience them; a distinguished physician gives a personal experience in this connection when suffering from some simple ailment: "The sound of a gong seemed to be seen as a pale ochreish disc in front of me a little larger than the full moon with an irregularly dentated edge, &c. When the gong ceased, this spectron persisted for a little time." Dr. Colman thinks there is a close connection between these colour sensations and the symbols which many people invariably associate with abstract ideas, and with the mental diagrams which always occur with others in connection with numbers, dates, and with serial events. These have been fully described by Galton and Flournoyand, and are more common than colour associations. He goes on to give some remarkable examples of these. One man could not think of "value" without appearing to see a particular gable of the private house of a professor of political economy who had been his instructor on the subject. The number twelve is frequently associated with a dial. Interesting diagrams of figures associated with the months of the year, the dates of great battles, &c., are figured. We cannot, however, consider these phenomena as intimately associated with colour hearing. We are inclined to look upon the latter as being always a neurosis, something of the nature of an obsession or besetment. The former is developed to a larger or smaller degree in all people, and facts difficult to remember are commonly associated with ideas and impressions, frequently of a nature so remote from the fact to be remembered as to be almost ludicrous. If, however, a person begins to associate, without rhyme or reason, numbers and events with curious mental diagrams, &c., the condition becomes a besetment. The one is a new creation of a neurotic mind, and the other is a perversion of a normal mental process. We cannot regard "colour hearing" as an associated sensation; we regard it rather as a reflex sensation abnormally developed. The sense of shivering already mentioned is also a reflex event after stimulation of certain emotional or sensory centres, but which is present normally. It would be interesting to know the family histories of Dr. Colman's cases, also as to whether any other neurotic stigmata were present, and further, to watch their subsequent mental history. We therefore cannot recommend the development and encouragement of these conditions, which after a time might become very distressing, and even lead to hallucinations of vision. In this connection we cannot do better than quote one writer's experience: "These various forms and colours which during childhood amused me, in time became an annoyance. The training received for professional life did not correct the changes in form nor the fantastic jumping about of the colours, which were not only different on every degree of the scale, but also on the same tone when words were sung. All sentiment was in singing on this account destroyed, and finally I decided to give up both singing and teaching."

Peripheral Neuritis.—This was the subject of a discussion at the annual meeting of the British Medical Association (Section of Pathology), 1895, and little really can be added to the views there expressed (*Brit. Med. Journ.*, Feb., 1896) saving the recent work of Dr. Fleming. Dr. Sharkey, in introducing the subject, remarked that the symptoms of peripheral neuritis had long been known. It was Graves who first suggested that they were the result of disease of the peripheral nerves, but it remained to Dumesnil, in 1864, to produce definite proof that this was so. There were many conditions put down to this disease which had not yet been proved to be so. We had, perhaps, been trying to draw too sharp a line between the peripheral and central nervous system, being too anxious to limit many of these diseases to the nerves, while the various agents producing them caused alteration in the centres as well. This has proved to be quite the case. Kahler, Pick, Korsakow, Eichhorst, Campbell, and recently Fleming have now demonstrated changes in the cord, and the latter in one case in the brain. What was the legitimate use of the term "peripheral neuritis"? It was doubtful whether we could use the term "neuritis" in the absence of those vascular phenomena looked upon usually as proof of inflammation. He constantly noticed that the condition found post mortem was segmentation and breaking up of the myelin. This was the so-called "parenchymatous neuritis." In other cases nothing at all was found; to these cases we would be more justified in using the term "nerve intoxication." In other cases still there were the vascular phenomena of inflammation present. A fuller pathology was needed, and the changes due to post-mortem influences particularly wanted investigation. The former has been much advanced by the recent work of Dr. Fleming (*Brain*, 1897). He found that there were moniliform swellings on the dendrites of nerve-cells in the brain. In the cord no changes were observed in the white fibres, thereby differing from various Continental observers who found changes, particularly in Goll's column. There were, however, hæmorrhages in various parts, and shrinkage and degeneration of cornual cells, with fewer processes and alteration in shape of the nuclei, and with nucleoli scarcely distinguishable. The peripheral nerves showed granulation of the axis cylinder, also proliferation of the segmental nuclei. There was degeneration of myelin with increase of leucocytes and connective-tissue cells. The perineurium was slightly thickened on its inner side, with a varying amount of exudation between it and the nerve-fibres. In the epineurium there was little that could be considered abnormal. The blood-vessels in the peri- and endoneurium showed marked changes. There was distension and proliferation of the endothelial cells of the intima, and a similar change, only to a less degree, in the media and adventitia. In the larger arteries a hyaline change had occurred in the adventitia. These changes in blood-vessels were first described by Minskowski in 1888. In some nerves corpora amylacea were seen. Dr. Batten showed in a case of tabes changes in the end-organs of nerves (*Brain*, 1898). Can, however, the changes described by Fleming be put down to true inflammation? Can nerve tissue ever inflame? There is reason to believe that the fibro-vascular changes seen in nerve tissue are often secondary to nerve atrophy. To continue Dr. Sharkey's address,

he remarked that in multiple neuritis the terminal portions of the nerves were nearly always affected. We have, however, no proof that this is so. He suggested two explanations; perhaps the peripheral ramifications were so delicate, or perhaps it was due to their being the farthest removed from the nerve-cell. Dr. Mott later said that it was possible in many cases of neuritis to explain the symptoms by Marie's theory. The nutrition of the nerve depended upon the cell, and it was reasonable to believe that any toxic agent in the blood would be absorbed by the dendrons, and would show its effects by changes in the remote portions of the cell, namely, the neuron and its peripheral terminations. Dr. G. Elder thinks that the neuritis of pregnancy is caused by the poisoning of the nerve-cells in the cord by the increased metabolism and production of effete matter associated with pregnancy (*Lancet*, June, 1896). Dr. Sharkey thought it still more remarkable that the poison should select certain nerves,—the extensor muscles of the legs in alcoholism; the extensor of the fingers and wrist in lead; in diphtheria the muscles of the throat and intra-ocular muscles. To these we may add the optic nerve in tobacco poisoning, and the cranial nerves in syphilis. Neuritis in the sympathetic system he thought required fuller investigation, and mentions that some cases of cardiac disease may be due to disease of the vagus. Dr. Campbell (Rainhill) has described extreme degeneration of the vagus in general paralytics with fatty heart. Dr. Mott, at Claybury, cannot, however, confirm this, and, after examination of the vagus in many cases where there has been fatty heart with invariably negative results, comes to the conclusion that it is rare, and points out that there are an immense number of sympathetic fibres unstainable by the Weigert method (*L. C. Asylums Report*, 1898).

Dr. Carr (*Lancet*, September, 1897) describes a case of dilated stomach combined with peripheral neuritis. He thinks that there are grounds for supposing that the effete products produced in the former may answer for the production of the latter. On the other hand, Dr. Russel (*Brit. Med. Journ.*, 1896) reported a case of peripheral neuritis in which there was enormous dilatation of the duodenum, which he thought might be due to neuritis affecting the vagus.

General Paralysis: its Ocular Symptoms and Clinical Groups.—The name of Bevan Lewis will always be associated with the pupillary phenomena of general paralysis. His observations were published in the West Riding Asylum *Reports*, vol. vi, and also in his *Text-book of Mental Diseases*. In the *British Medical Journal* for April, 1896, a further paper is published dealing with the ocular symptoms of general paralysis with special reference to its clinical groupings. The first part of the paper is devoted to a most excellent summary of the anatomical details involved in the reflex loops for contracting and dilating the pupils, and the associated movements in accommodation. This is followed by a digest of the functional activity of the iris and its abnormalities, in which important points are given, with a view to the elimination of all possible fallacies before coming to the conclusion that there is present a morbid condition of the nervous system. This part of the paper is a very important one, and in examining the pupil, such points as the possibility of adhesions between iris and lens capsule producing inequality, the necessity for distinguishing between the rhythmic

oscillations produced by the respiratory efforts and "hippus pupillæ," the dilatation of the pupil by sensory stimulation and psychical conditions, &c., should always be borne in mind. In the next part of his paper Bevan Lewis allots to himself a difficult task, and attempts to associate certain pupillary states with other symptoms, dividing general paralytics into five different groups. In Group 1 there is a moderately large pupil, becoming more and more dilated, rarely unilateral, and the Argyll-Robertson phenomenon; the lesion being in the motor segment of the reflex pupillary loop, probably nuclear (third nerve), lesion of Meynert's fibres being rejected. Sooner or later there are unduly exalted deep reflexes, but seldom ankle-clonus, and also increased myotic irritability. The speech troubles are a marked and early symptom, together with excessive facial tremors. The exalted knee-jerk is not a sequel to convulsive seizures. These symptoms are united with great optimism and profound dementia. The second group comprises a number of cases presenting mydriasis, with associative iridoplegia rapidly passing into cycloplegia. This is the earliest symptom. There is a lesion in both sympathetic and motor segments. Spinal symptoms are not a prominent feature, but there are early speech troubles of a profound nature ("drunken speech"). The mental condition is one of notable egoism, self-assertion, and argumentative tone; and acute excitement with frequent convulsions is a common occurrence towards the end. They usually run a rapid course, and five out of the twelve were syphilitic. In the third group the pupils tend to become small and spastic, and the Argyll-Robertson phenomenon is again present. There are other symptoms of a tabetic nature, such as absent knee-jerks, failure of equilibriation, and locomotor inco-ordination and defective sensation. The articulation is very defective, and mentally such optimism with excitement and profound dementia is a marked feature. In this group convulsive seizures are rare. The fourth group comprises cases presenting late eye symptoms, with paralytic mydriasis and partial reflex iridoplegia for light only. There is present ataxic paraplegia, limited to the lower extremities, with great facial ataxy and extreme speech troubles. Profound mental enfeeblement is a sequel to epileptiform seizures. Usually sensibility remains unaffected. In the fifth group the mental symptoms preponderate. There are no oculo-motor symptoms except occasional inequality, and the disturbances of speech, equilibriation, locomotion, and sensation, are usually absent, also convulsive seizures. The mental state commonly is from the first a dull heavy state with advancing mental enfeeblement. *Post mortem* in these cases, 75 per cent. exhibited no adhesion over the motor cortex, and in 44 per cent. they were absent entirely. When adhesions were present they were usually over the precentral regions. Grinding of the teeth was a persistent feature in one case where the adhesion was marked over the right lower central region. In previous cases this symptom usually occurred when the part most involved was the left lower central region.

We notice the absence of melancholia as a prominent symptom in any of these groups, a symptom which appears to be present in a fair proportion of female cases. The inclusion of the cases composing the fifth group as general paralytics, a series of cases which Mickle is inclined to regard as general paralysis pure and simple, is a noteworthy

feature, and one which raises an important question. General paralysis is undoubtedly progressive dementia and paralysis, and is supposed to be a pathological entity. There is some reason to doubt this. Dr. Mott is gradually accumulating evidence that general paralysis and tabes dorsalis are pathologically identical, with syphilis as the most important ætiological factor. The actual pathological process, there is reason to believe, is a more or less hurried premature senile decay, the fact of its premature occurrence alone separating it from senile dementia. Some authorities will, however, decline to recognise Group 5 as general paralysis, and certainly clinically and pathologically there is a striking difference between this group and the previous ones, although it is probably only one of degree. The inclusion of these cases raises a difficulty in comparing the statistics of the pupillary phenomena. It would appear to be almost impossible to diagnose these cases at once. The gradual progression of the enfeeblement of mind and body alone, raises the suspicion of general paralysis. *Post mortem* some of the most distinctive features are absent, and without a previous knowledge of the case many pathologists would probably miss its real character.

Drs. Dawson and Rambaut (Dublin) have published the results of a study of the pupils in forty cases of undoubted general paralysis (*Brit. Med. Journ.*, September, 1898). They find inequality in 92·3 per cent. of cases, alteration in size in 78·2 per cent. (no marked increase of dilated over contracted), alteration of the reflex dilatation in 95 per cent., of consensual reactions in 67·5 per cent., of direct light in 42·5 per cent., and the Argyll-Robertson phenomenon was present in 30·76 per cent. of cases. On comparing these results with control cases they came to the conclusion that the value of the inequality and the reflex dilatation is *nil*. Bevan Lewis is, however, of the opinion that inequality without loss of reactions is important, as it may be the first sign of cortical trouble, the loss of reactions and the late inequality being due to implication of cilio-spinal and bulbar territories. Siemerling (*Berl. klin. Woch.*, November, 1896) gives the results of examination of the pupils in 3000 cases of general paralysis, and finds the Argyll-Robertson pupil in 68 per cent. of cases. He examined the pupils in 9000 cases of insanity in all—a momentous piece of work, if the mode of procedure ensured such accuracy as is characteristic of Bevan Lewis's work.

There is, however, something very unsatisfactory in all these statistics. In the first place the personal factor of the examiner must be considered, especially in such results as "sluggish," "slight," &c., and probably the statistics alone to be relied upon are those which state that certain reactions are "absent." At the best, statistics of the pupil anomalies in general paralysis, without any sort of separation into stages, early and late reckoned together, are more or less valueless. The pupil anomalies are not a fixed quality; they are progressive, and change with the evolution of the disease, the initial change and the subsequent progression being different in different cases, according to the parts involved. Commonly inequality occurs first, then loss of reactions in various order, the most usual order being reflex dilatation, then consensual, then direct light (Argyll-Robertson), and ultimately

the pupil does not contract on convergence (complete iridoplegia), and finally absolute loss of all power of accommodation is superadded (cycloplegia). It is the progression of these changes which is important. An ideal research would be to examine the pupils at short intervals, and state the results after the decease of the patients. Thereafter it would be some value to know, in the case of a general paralytic running his course in three years, that during the first six months his pupils were in one condition, in the second six months in another condition, &c. The same with a case lasting only twelve months. Thus some results could be come to as to the predominant pupil change associated with other prominent symptoms, and the rapidity of the disorder. Statistics on these lines would be of real value in differential diagnosis.

Erythromelalgia.—It is to Weir Mitchell that we owe the first real clinical description of this condition. Its pathology, however, still remains obscure. In his paper which was published in July, 1878 (*Amer. Journ. of the Med. Scienc.*), he represents the condition as due to some unrecognised type of some spinal or cerebro-spinal disease, and prophesied that in future it would be found in connection with distinct lesions in definite regions. This is proving to be the case, so much so that it is being no longer recognised as a disease *sui generis*, but rather as a symptom in the recognised diseases of the cerebro-spinal system. There is probably much ground to support Osler's (1) opinion that many of Weir Mitchell's cases ought to be classified as Raynaud's disease. A communication on erythromelalgia associated with disease of the spinal cord has recently been made by Dr. Collier, London (*Brit. Med. Journ.*, August, 1898), and an account of ten cases is given. In 1894 Lewin and Benda,(2) after studying many cases, stated that in their opinion the condition was a symptom of definite disease of the central nervous system, or of functional disease. Auerbach and Edinger in 1897 (3) reported a case of tabes in which this condition occurred in the right foot, and on examination after death degeneration of the posterior roots of the lower lumbar and sacral nerves, almost limited to the right side, was found. The spinal ganglia and peripheral nerves were found to be normal. The tract in the cord principally affected was the postero-internal on the right side, close to the septum. A digest of Dr. Collier's cases will be of interest.

Case 1 was one of disseminated sclerosis, and the erythromelalgia occurred in both feet, and in course of time extended as high as the knees. The pain and vaso-motor symptoms always appeared simultaneously, the attacks at first being spontaneous only, but afterwards being always induced by the dependent position. She was relieved by the application of cold, and by bandaging tightly with Martin's bandage.

Case 2 had the same spinal condition as the latter, but in this case the erythromelalgia was one of the first symptoms of her condition, and was at first thought to be due to some functional disturbance. It first appeared in the feet upon walking, the recumbent position or the application of cold at once causing the condition to disappear. It could be usually induced in either foot by a dependent position, but not always. There were no persistent vaso-motor palsy or trophic

changes, and it sometimes occurred spontaneously in the recumbent posture.

Cases 3, 4, 5, and 6 also suffered from disseminated sclerosis. In Case 3 the erythromelalgia occurred spontaneously at first in both feet when in bed. The dependent position, although it increased the symptoms, could not of itself induce the condition. Elevation, however, alleviated the symptoms. Eventually permanent vaso-motor dilatation appeared, and deepened in intensity as the attacks went on. Nine months later paraplegia occurred, and the vascular disturbance gradually disappeared. In Case 4 the distribution was peculiar, occurring on the outer side of the left foot, including the two outer toes, and reaching the external malleolus. The whole left leg below the knee showed a curious *tache*, not unlike urticaria scripta. A similar condition to the latter is reported by Senator.(1) Case 5 was a noteworthy one. The operation of double oöphorectomy had been performed, and was followed by severe neurasthenia. The attacks of erythromelalgia came on three years ago in the hands and feet, sometimes affecting the hands alone. The attacks were accompanied by excessive tenderness and profuse sweating of the parts involved. The effects of cold and position were typical. In this case its occurrence was the first symptom of organic disease of the nervous system. In connection with oöphorectomy it is interesting to note that in several published cases in males erythromelalgia has been associated with aspermatism. In Case 6 the areas affected were the neck and head.

Cases 7 and 8 suffered from tabes dorsalis. In Case 7 the attacks of erythromelalgia occurred when walking or sitting, and occasionally when lying in bed. It affected both legs up to the knees, and afterwards the hands. There were no tender points or persistent vaso-motor palsy or trophic changes. Tingling occurred, but no pain, the latter being explained by the regions being analgesic. In Case 8 it occurred symmetrically, affecting both hands. There was only one attack, and that occurred simultaneously with a gastric crisis. Alteration of position had its usual effects.

In Case 9, one of myelitis, the condition varied much in degree. It occurred in the feet, and sometimes extended to the middle of the calf. Case 10 had only a slight degree of erythromelalgia, its distribution being from the knees downwards, the redness not being sharply defined as in the other cases. This case was chiefly one of traumatic neurasthenia, but the existence of slight sphincter trouble and persistent foot-clonus suggested that there was some lesion of the cord. The occurrence of erythromelalgia strongly supported the probability of this.

All these cases occurred within a period of six months, showing that erythromelalgia is not a rare symptom of spinal cord disease. It has no doubt been previously overlooked. In several of the cases there occurred only spontaneous attacks; afterwards the conditions became frequently induced by the dependent posture, and later a condition of permanent vaso-motor palsy made its appearance, the attacks meanwhile continuing. This sequence suggests an irritative lesion of nerve structures governing the blood-vessels being the cause of the vascular crises, and of the progress of this irritative lesion to a partially destruc-

tive lesion being the cause of the persistent vaso-motor palsy; these phenomena in vaso-motor nerve elements being parallel with pain followed by anæsthesia in sensory nerve elements, and with spasm followed by motor paresis in motor elements. In all the cases the vascular change was never preceded by the sensory disturbance, but either preceded it or the two appeared simultaneously. It seemed as if the sensory disturbance was a local result of the altered vascular condition of the part, and erythromelalgia may be the first symptom of organic disease of the cord, and of great value in diagnosis, and especially valuable in the differential diagnosis between functional disease and disseminated sclerosis.

Dr. Collier's paper is a very valuable one, but its value would be enhanced if he could, as opportunity occurred, supply post-mortem and microscopical descriptions of the lesions in his cases.

Dr. Urquhart has had an interesting case in which the fingers were affected. The patient, a young lady, obtained relief by the use of hot water. She afterwards developed acute mania, which was followed by dementia. She eventually recovered after a course of thyroid treatment, and has had no return of the erythromelalgia. It is probable that this case, like some Weir Mitchell described, was more related to Raynaud's disease than erythromelalgia.

The Hour of Death.—C. F. Beadles (Colney Hatch) has been at great pains to determine which hour in the twenty-four is most deserving of being termed "the hour of death" (*Brit. Med. Journ.*, 1896). His conclusions are founded upon a careful inquiry as to the time at which death occurred in some 5424 cases, male and female, all of whom died whilst resident at Colney Hatch Asylum—a task which must have taken considerable time and energy. The circumstances under which these statistics were compiled were extremely favourable. As Mr. Beadles remarks, in asylums the time of death is recorded with a degree of accuracy which surpasses that of any other institution or amongst the public at large. His results are interesting and somewhat remarkable. "The great rise that takes place in the death-rate amongst the males between the hours of 5 and 7 a.m. places this some one or two hours later than the view popularly held, which is generally referred to by the more ignorant as about midnight, and by the better educated as in the small hours of the morning, between 2 and 5 a.m. The entire absence of a great rise in the early morning amongst the females is noticed, and in its place the occurrence of a decided fall. On the other hand, the most fatal hour with these females occurs shortly before noon, and again between 6 and 7 in the evening; but throughout the twenty-four hours the recording line of the females neither rises nor falls to the same degree as the males, but remains more steady."

Cold and Glycosuria.—Dr. Sankey records a case of glycosuria in which the condition occurred coincident with the fall of the weather, and the recovery with the break of the frost, which he has noticed each winter since 1893 (*Brit. Med. Journ.*, 1897). This is a most interesting case, particularly when it is correlated with conditions such as paroxysmal hæmoglobinuria and albuminuria, which are known to be in some way connected with exposure to cold. Some more cases confirming Dr. Sankey's observation would be of extreme value.

The Power of Nature in Disease.—This is the subject of an article by Dr. Wallace Anderson in the *Scottish Medical and Surgical Journal*, September, 1898. The title would suggest something of academic interest only, but this is not so, the outcome being very practical, stating, as it does, points which ought to guide us generally in the treatment of disease. The first section is largely historical, and partly a statement of the whole case, a concluding chapter being promised which will give in more detail, different forms of disease exemplifying and illustrating the conclusions already arrived at.

To begin with, Dr. Wallace Anderson states what is practically the *raison d'être* of his paper, the tendency of medical art and craft to supersede the methods of nature in the cure of disease.

"Amid the activities and resources of art, never more abundant and more fruitful than in our own day, one is apt to lose or to ignore the underlying and enduring methods of Nature. Man claims art for his very own. And the ways of Nature that lie deep are apt to be unnoticed and to remain unknown. Our art asserts itself to-day as if Nature were a thing of the past. The mother of us all, at whose feet we have played our little part from age to age, is at last gone, and she has left us microbes. We think not. We think there is still something to be gained by the study of her methods and ways of working, as well as of the works themselves, of her methods of healing that are of no time or fashion, of her ways that were never new and never to be old."

The subject is one of great difficulty because of the many and conflicting views one can take of it. From one point of view, Nature, whatever meaning we may attach to it, might appear to have another function besides the preservation of life, *i. e.* the destruction of life. There can be no evolution unless there is death of previous and presumably inferior species. If this view is taken, then the effort of the body in resisting disease is one process of Nature opposing another working in an opposite direction, the result showing which was the beneficent process in individual cases, the fittest surviving and the weaker being extinguished. What is the position of medical art if this view be taken? Clearly one of inactivity; because in the one case its help is not needed, and in the other case successful interference would mean the survival of the unfit, which is not Nature's intention.

From another point of view, however, it can be said that Nature ordains that the body should survive until its initial stock of vitality is used up. If disease occurs, then it obviously interferes with this intention, and Nature resists. In other words there is a combat between the power of Nature and the power of disease. What, then, is the position of medicine to this view? Obviously one which would co-operate with Nature, which could be accomplished in two ways; (*a*) by learning Nature's methods and supplementing them, and (*b*) by removing the obstacles in Nature's way and by carrying war into the enemy's camp.

To which of these methods do we give precedence? Dr. Wallace Anderson maintains that there is a tendency in these days to vaunt the latter and neglect the former, and in this he is probably correct, but whether our treatment suffers thereby is another question. The methods of Nature are, generally speaking, obscure, and thereby difficult to supplement, and our medical art runs the risk of being reduced to one of

inactivity and of expectancy. This position is not an agreeable one to the modern physician. By adopting other methods, however, he runs the risk of interference with a natural process already working beneficially, and thus lessens his chance of success. This being so, then it is surely his duty not to neglect the methods of Nature, but rather to study them, and to modify his treatment accordingly.

What, however, is the result of the most enlightened treatment? Are we diminishing the sum total of disease? Or are we keeping alive decrepit and degenerate people with predispositions to disease, which will be passed to their children,—people who, if left to Nature's cure, would die and become harmless? Is the human race healthier and stronger? The best answer we can give is only a partial denial or affirmation to these questions. Some diseases have practically disappeared, others have lost some of their virulence, but the large proportion appears to be always with us. The average human life is, however, stated to have been prolonged. But can we put this down to the actual treatment of disease? Not entirely; acquired immunity and better hygienic conditions of life have surely contributed largely.

We have considered this point at length because it is the most noteworthy feature of Dr. Wallace Anderson's paper. The rest of the paper is largely historical. He begins with Hippocrates, before whose time medicine was closely allied with philosophy, and who gave medicine a new life, the key-note of which was his famous aphorism, "Nature is the healer of our diseases;" an aphorism in which was centred all his practice and teaching. What Hippocrates understood by Nature does not admit of a precise answer. Undoubtedly he uses the word in very different senses.

For example, he speaks of nature as opposed to art; or, again, of nature as we understand the term human nature; or, again, more specifically of the individual nature, constitution, or temperament.

It seems probable that he includes under the term nature all the functions of the body which are disturbed in diseases, all of which, in the aggregate, constitute the φύσις or nature of the body, and which are themselves the sources of healing. A further question is raised as to whether he believed nature to be a deliberating intelligent force. The answer is in the negative, an opposite conclusion being a misconception of Hippocrates' meaning. From the time of Hippocrates the doctrine of a vital force of nature, acting directly and essentially as a healing power, has never been lost sight of, and has often been the subject of great controversy, and even of bitterest censure. Dr. Wallace Anderson sketches its history down to our own times, but we regret that space will not allow of us following its career of varying vicissitudes so delightfully and artistically told in his paper. The opinions of Celsus, Galen, Paracelsus, van Helmont, Stahl, Sydenham, &c., are given and their influence described, Sydenham and Cullen deservedly occupying prominent positions.

Moveable Kidney and its Influence on the Nervous System.—Moveable kidney usually produces symptoms which are fairly diagnostic, although they vary somewhat in different cases. The actual palpation of a moveable kidney presents no difficulty usually; but in some cases, however, owing to the range of movement being small, or to the presence

of some condition such as excessive obesity, its palpation is by no means easy. Its symptomatology is not so definite as to allow of a diagnosis being made unless it is confirmed by abdominal palpation.

Dr. Suckling (*Edin. Med. Journ.*, September, 1898), in a paper on this subject, asserts the condition to be far more common and of more importance than most physicians would probably agree to. He would appear to have examined the abdomen with signal success as regards moveable kidney.

"Thousands of women are in bad health and unable to perform their duties in life, and suffer from nervous exhaustion, owing to moveable kidney. When they seek medical advice they are often not requested to remove their corsets. Out of 100 women, 42 had dropped kidney; and of the 100 men, 6 had dropped kidney; in many cases both kidneys were dropped. I could give several hundreds of cases if it were necessary."

Statistics of conditions diagnosed clinically are always open to question, but taking the results of a large number of post-mortems, moveable kidney is rarely found. Out of 110 females it was found in one case, being due to the renal artery coming off from the bifurcation of the aorta. If the condition had been a common one, it would surely have been demonstrated so on the post-mortem table. Dr. Suckling's method of palpation of the kidney is worthy of note. One hand is used in case of the right kidney. The thumb is placed under the last rib at the back, and the fingers in front below the costal margin. If not felt at once, on the patient taking a deep inspiration the kidney will slip into the fingers and can be easily slipped back. It is necessary, however, in difficult cases to examine the patient sitting or standing. A similar procedure is adopted with regard to the left kidney, only both hands are used, the left arm being placed around the body, the left hand being used to palpate posteriorly, while the fingers of the right hand are used anteriorly.

The subjective symptoms are said to be pain, mental depression and hypochondriasis, diarrhœa, constipation, vertigo, enlarged spleen, dyspepsia, albuminuria, agoraphobia, exhaustion, epilepsy, colic, &c.—these symptoms were not present in all cases, but each was a marked feature in individual cases. Its occurrence in women is put down to tight lacing, or a fall or strain, tall people being very liable. In this Dr. Suckling differs somewhat from other observers. Loss of tone of the abdominal walls due to numerous pregnancies is a well-recognised cause, and so also are congenital conditions. In asylum practice it occasionally occurs, but was only found in two cases out of 693 women admitted to Hanwell last year.

Dr. Suckling's treatment consists in the wearing of a belt of his own invention, a woodcut of which appears in his paper. He claims that his belt not only removed the symptoms, but in some cases cured the condition, amongst others a case of epilepsy, where the fits ceased after its use.

Some Trophic Lesions.—Trophic changes resulting in permanent death of various parts of the body are of great interest from both ætiological and pathological standpoints, especially when the conditions occur symmetrically.

E. R. Rouse (Colney Hatch) records (*Lancet*, 1896) two cases of puerperal mania with gangrene as a complication, and which are perhaps unique, especially as recovery was complete in one case and partial in the other. In the first case the woman was thirty-one years of age, and was admitted in a state of acute mania. A week later there developed in rapid succession gangrene of both feet, one finger, and the right ear. The lochia became putrid and offensive. The condition as regards the finger and ear cleared up quickly, but progressed unfavourably as regards the feet. In spite of energetic treatment, signs of septic poisoning occurred, and amputation was proposed and carried out successfully. She eventually made a good recovery. In the second case the woman was aged thirty-seven, and was admitted suffering from acute mania. In about fourteen days the right leg became gangrenous, extending to just below the knee. The leg was amputated, and, after several recurrences of gangrenous patches in the flaps, healing occurred by granulation. The mental condition improved for a time, but soon relapsed. Dr. Mott examined the amputated limb and found venous thombosis to have been the chief cause, coupled with endarteritis of the larger arteries.

In both cases it is unfortunate that the condition of the heart and circulation is not recorded beyond the general remark that their physical condition was normal on admission. This applies more especially to the first case.

J. R. Lord (Carmarthen) describes a case of symmetrical gangrene of the feet occurring in an early general paralytic (*Brit. Med. Journ.*, 1898). The patient presented the usual symptoms of general paralysis with unequal pupils, the reactions being sluggish on the dilated side. In four days after admission, her feet were found to be nearly black, with great tenderness and swelling about the ankles. A small patch of a similar nature occurred on one side of the left knee-cap, which disappeared in a few days. The gangrene in the feet was progressive, and was followed by great sloughing of the buttocks; septic poisoning and diarrhœa supervened, and the patient succumbed just a month after admission. In this case, the patient's physical condition was taken the day before the gangrene commenced, and there is great difficulty in explaining the occurrence of the latter. Embolism could be practically excluded; diabetes also, and there had not been any traumatism or injury. It is possible that syphilitic endarteritis was present, resulting in thrombosis. Although syphilis is not mentioned in this case, yet a careful inquiry into the previous history in general paralysis will frequently reveal specific disease as an ætiological factor. Otherwise the condition can only be put down to some change in the nervous system.

The so-called trophic changes in insanity can frequently be explained by conditions which are not in any way peculiar to asylum inmates, such as embolism from valvular incrustations or phlebitis, and thrombosis in degenerated arteries, &c. In every case the cause ought to be carefully investigated, and such conditions as these eliminated before coming to the conclusion that the nervous system is at fault. The *gangrène symétrique* of the French ought to be borne in mind—a condition which appears to depend upon anæmia and enfeebled circula-

tion. There appears, however, to be a marked tendency to trophic changes occurring in the insane which are not explicable on ordinary grounds, and one ætiological factor may be mentioned here as noteworthy. In each of the cases quoted the condition occurred in January. This would point to cold as a predisposing cause, and it would be interesting to know the ratio between the number of cases of sloughing bedsores, gangrene of the lungs and extremities, &c., occurring in the winter, and the number occurring in warmer months. It would appear to be very necessary to see that in acute cases, and in cases liable to gross trophic lesions, great care is exercised to avoid chill, especially in winter, not only by careful clothing during the day, but by guarding against the temperature falling in their rooms and dormitories at night-time below a certain level. The latter is important because of the difficulty in keeping patients covered during the night.

Leg Pain in Insanity.—Dr. Sankey, at a branch meeting of the British Medical Association, read a paper on this subject (*Brit. Med. Journ.*, 1898). He defined "leg pain" as anything between the dull ache of some cases of general paralysis, spoken of as a sense of weight, and the acute lancinating pain, which was the leg pain to which he especially referred. It was noticed frequently in general paralysis, but occurred in other cases. From the description of patients when sufficiently intelligent to give one, this pain appeared commonly to commence in the feet and extend to the knees. It was frequently the precursor of contractions of the feet and malnutrition of the muscles, and was, in his opinion, of grave importance, meaning that mental recovery was unlikely, and that bodily degeneration was commencing. He gives two cases in full, and states that the affection was probably due to a degeneration slowly involving the cord, probably secondary to the brain disease which caused the insanity; the form of degeneration being, he believed, sclerosis, or a chronic spinal meningitis, but it might differ in different cases. We should like some post-mortem proof of these statements. We are of the opinion that the condition in the cases he gives as examples was due mainly, if not entirely, to the presence of delusions, one characterising his pain as being like "wiring" and "traps," and the other like "electric shocks." We do not think it is in accordance with general experience that our general paralytics suffer from "leg pain" unless they are classified as tabetic, and even then the condition if it occurs is present only in the earliest stages, the pain shooting down the leg and not in the opposite direction.

Spontaneous Rupture of the Heart in the Insane.—This is a rare occurrence, considering the prevalence of cardiac degeneration in insanity. Cases have been recorded from time to time, Beadles describing one in 1893 (*Path. Soc. Trans.*). Recently two cases have been recorded, each presenting unusual features. In F. O. Simpson's (Wakefield) case (*Brit. Med. Journ.*, 1896) the rupture was complete, the part of the heart affected being the central part of the posterior wall of the left ventricle. In Quain's cases (*Path. Soc. Trans.*, vols. iii and xii) 76 per cent. occurred in the left ventricular wall, but 43 were anteriorly. The heart in Simpson's case was fatty, being both degenerated and infiltrated. The arteries were atheromatous. In

Dr. Hunter's (Whittingham) case (*Lancet*, 1897) the rupture was incomplete, owing to the great thickening and adhesion of the pericardium. It was situated in the right ventricular wall anteriorly, and communicated with the ventricular cavity by a ragged channel. To quote Quain's cases again, 13 per cent. occurred in the right ventricular wall, in nine of which it was situated anteriorly. There was again present fatty degeneration and atheroma, and also in this case chronic interstitial nephritis. In neither case do the writers record the condition of the coronary arteries, which were most probably much diseased. In both cases the age was over sixty, in Hunter's case seventy-seven. In neither case is there any mention of any excitement or strain; both were demented. It is extremely probable that in these cases a previous intra-muscular hæmorrhage, the result of the degenerated condition of artery and muscle substance, was the actual starting point of the rupture.

An Unusual Case of General Paralysis of the Insane, by R. D. Hotchkis, M.D. (*Glasgow Medical Journal*, June, 1897).—This case, that of a young man of 25, always regarded as simple, but tall and well developed, after business worry manifested considerable exaltation, followed by a period of comparative well-being, with "faulty and slight mental enfeeblement," succeeded by a state of acute resistive excitement, ending fatally. The post-mortem revealed a very extensive "pachymeningitis hæmorrhagica." In the motor region one section showed well-marked aneurismal dilatation of the arterioles. The question is whether such a case can be fairly classed as general paralysis, whether the symptoms from the outset were not due to the hæmorrhage, the recurrence of which after a period of attempted repair led to the simulation of three stages. The three stages of general paralysis are by no means an essential part of the disease, but the motor inco-ordination and disordered reflexes are and were apparently scarcely appreciable in the clinical history. Dr. Hotchkis has done good work in placing on record this case. Such records help to the clearing up of that rubbish heap of diagnosis which is termed general paralysis, and his remarks on this disease are in accord with the most advanced knowledge of the subject.

Penetration of Brain by a Ramrod.—Dr. Lacy Barritt, in the *Lancet*, January 7th, reported an interesting case of penetration of the brain by an iron ramrod, which was followed by complete recovery. The following are briefly the facts of the case, which was admitted under his care at the Johnston Hospital, Spalding. The patient, a boy fifteen years of age, while employed to scare crows, foolishly attempted to charge his muzzle-loading gun when the hammer of it was cocked and a cap was on the nipple, the natural consequence being that the gun went off. The ramrod which the boy was using at the time was an iron one 30½ inches long, weighing 10¾ ounces, and measuring ⅝ inch in diameter at its bulbous end. This was driven through his skull just above the left eyebrow, and made its exit in the region of the left parietal eminence. It was subsequently picked up fourteen yards away from the spot where the accident occurred, with the patient's cap transfixed on it. The boy was afterwards able in a dazed condition

to walk 200 yards to the farmyard and to carry his gun. He then drove three miles to the hospital, and on reaching this he was able to get out of the trap unaided. Shortly after his admission Dr. Lacy Barritt found him in a semi-comatose condition, temperature normal, pulse slow and regular. He could easily be roused, and would then answer questions rationally, but in a dull and hazy manner. There was impaired movement of the right arm, and marked dilatation of the left pupil, which reacted sluggishly to light. A slight discharge of brain substance occurred through the parietal wound. This latter could easily admit the tip of the little finger, the wound of entrance being of course smaller. Expectant treatment was used, and on the fifth day the patient became more conscious, answered questions readily, and could use his right arm more freely. From this on he progressed favourably, and was allowed to get up three weeks after his admission into the hospital. At the same time the wound of entrance healed, and the wound of exit also nearly completely so. Subsequently he made a perfect recovery mentally, and practically regained the full use of his arm. Evidently the track of the ramrod was through white matter, except of course at its entrance and exit; and it must have been above and internal to Broca's convolution, and just anterior to the upper portion of the ascending frontal convolution; and thus the centre for speech, and that for the arm, fortunately escaped being damaged.

This case is very similar to one reported by Dr. Sanderson Christison, of Chicago, in that both patients were very slow in answering questions while otherwise exhibiting no mental peculiarities. Dr. Christison's patient, a female 44 years of age, had a neuro-gliomatous tumour of the frontal lobes; this did not reach the cortex anywhere except towards the median line, and it extended backwards to the borders of the lateral ventricles.

In addition, the case reported by Drs. Francis, Starr, and van Gieson, namely, a female 45 years of age, who likewise had a neuro-gliomatous tumour implicating the frontal lobes and the anterior knee of the corpus callosum, and which did not reach the cortex anywhere except towards the median line, also showed the mental phenomenon of slow answering of questions, but at the same time she did so in a rational manner.

(1) Osler's *System of Medicine*. (2) *Berliner klinische Wochenschrift*, 1894. (3) *Nervenheilkunde*, September, 1897. (4) *Berliner klinische Wochenschrift*, 1892.

Part IV.—Notes and News.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

Annual Meeting.

The fifty-eighth annual meeting of the Medico-Psychological Association was held in London on the 27th and 28th July, 1899. Dr. Urquhart presided on the opening of the proceedings. The following members were present:—A. R. Urquhart (President), J. Beveridge Spence (President elect), Fletcher Beach, G. H. Savage, F. W. Mott, H. Rayner, J. M. Moody, R. Percy Smith, G. F. Blandford, David Nicolson, W. Julius Mickle, G. E. Shuttleworth, H. Forbes Winslow, James Chambers, Heurtley Sankey, D. M. Cassidy, David Bower, James Rutherford, R. L. Rutherford, Conolly Norman, D. Yellowlees, Charles Mercier, Ernest White, T. W. McDowall, Elliot Daunt, J. W. Stirling Christie, A. S. Newington, J. B. Hyslop, T. L. Rogers, W. Douglas, H. Gardiner Hill, J. Peeke Richards, G. E. Mould, F. A. Elkins, J. Sutcliffe, H. Wolseley-Lewis, W. H. B. Stoddart, F. R. P. Taylor, D. J. Sherrard, W. Ernest Jones, Rothsay C. Stewart, J. J. Pitcairn, L. A. Weatherly, R. Langdon-Down, E. B. Whitcombe, A. D. O'C. Finegan, T. S. Tuke, A. W. Campbell, T. Outterson Wood, Alfred Turner, S. R. Macphail, C. E. Hetherington, P. W. Macdonald, A. R. Turnbull, Crochley Clapham, C. K. Hitchcock, W. F. Menzies, H. Corner, R. N. Paton, J. H. Horton, T. Carlyle Johnston, L. R. Oswald, James Middlemass, J. E. M. Finch, H. Hayes Newington (Treasurer), and Robert Jones (Hon. Sec.).

Honorary members present: Sir John Sibbald, C. H. Hughes, G. T. Hine.

Visitors: Dr. Peterson of New York, Professor Pontoppidan of Denmark, J. G. M. Hine, Miss S. Brough, Rev. F. Mann.

Apologies for non-attendance were received from Drs. A. E. MacDonald, M. Morel of Mons, J. Bresler of Freiburg, H. A. Benham, Evan Powell, W. R. Watson, and J. A. Oakshott.

The minutes of the previous annual meeting were taken as read, confirmed, and signed by the President.

Previous to the election of the Officers and Council, Dr. Conolly Norman referred to Dr. Goodall's resignation as Editor, and suggested that the question should stand over for the present. This was agreed to.

The President then appointed Drs. Weatherly, Moody, Cassidy, and Seymour Tuke to be scrutineers, and the Officers and new Members of Council nominated for 1899 were appointed as follows:

The Council, 1899.

President	J. Beveridge Spence, M.D.
President Elect	Fletcher Beach, M.B.
Ex-President	A. R. Urquhart, M.D.
Treasurer	H. Hayes Newington, F.R.C.P.Ed.
Editors of Journal	Henry Rayner, M.D. A. R. Urquhart, M.D. Conolly Norman, F.R.C.P.I.
Auditors	T. Outterson Wood, M.D. D. Bower, M.D.
Divisional Secretary for—	
South-Eastern Division	E. W. White, M.B.
South-Western Division	P. W. Macdonald, M.D.
Northern and Midland Division	W. Crochley Clapham, M.D.
Scotland	A. R. Turnbull, M.B.
Ireland	A. D. O'C. Finegan, L.R.C.P.I.
General Secretary	Robert Jones, M.D., B.S., F.R.C.S.
Secretary of Educational Committee	C. A. Mercier, M.B.
Registrar	H. A. Benham, M.D.

Other Members of Council elected at Annual Meeting.

G. Stanley Elliot, M.R.C.P., R. Percy Smith, M.D., D. M. Cassidy, M.D., R. D. Hotchkis, M.B., H. T. S. Aveline, M.R.C.S., W. R. Dawson, B.Ch.

Parliamentary Committee.

The members of the Parliamentary Committee were re-elected with the addition of Dr. David Bower and Dr. C. K. Hitchcock.

Educational Committee.

Dr. Carlyle Johnstone proposed that Dr. Turnbull and himself be appointed on the Committee as additional members. This was seconded by Dr. Macdonald.

Dr. Clapham then proposed and Dr. Macphail seconded that Dr. Menzies and Dr. Adair of Wadsley be appointed.

Dr. Turnbull then proposed and Dr. Carlyle Johnstone seconded that Dr. Macdonald and Dr. Weatherly be added to the Committee.

Dr. Ernest White proposed and Dr. Beach seconded Dr. Whitwell as an additional member.

Dr. Carlyle Johnstone proposed and Dr. Clapham seconded Dr. Finegan as an additional member. These nominations were agreed to.

Election of New Members.

The following were elected ordinary members of the Association:—Harmer, William Allan, L.S.A., Resident Superintendent and Licensee, Redlands Private Asylum, Tonbridge, Kent (proposed by G. E. Shuttleworth, Fletcher Beach, and Robert Jones); Law, Charles Donaldson, L.R.C.P. and S. Edin., L.F.P.G.S., District Asylum, Inverness (proposed by John Keay, A. F. Turnbull, and Robert Jones); Moore, William David, M.D., M.Ch., Medical Superintendent, Holloway Sanatorium, Virginia Water (proposed by G. H. Savage, David Nicolson, and James Chambers); Spicer, Arthur Herbert, M.B., B.S.Lond., Assistant Medical Officer, Claybury Asylum, Woodford Bridge, Essex (proposed by G. H. Savage, F. W. Mott, and Robert Jones); Taylor, Inglis, M.B., C.M., F.R.C.S. Edin., 5, Bulstrode Street, Welbeck Street, London, W. (proposed by T. Outterson Wood, Ernest W. White, and Robert Jones).

Treasurer's Report.

The Treasurer presented the balance-sheet, and said that while the expenses had gone up the income had also gone up. The assets keep increasing over liabilities slowly. At this present moment there was a balance in the bank of £663, odd shillings, which he believed had never been equalled before. He further reported that there was something to come off that sum in respect of the last number of the Journal.

Dr. Seymour Tuke reported on behalf of the Auditors.

The President then moved that the accounts be adopted as printed (see p. 828). This was seconded by Dr. Whitcombe, and the President having put it to the meeting, the motion was adopted.

Report of the Parliamentary Committee.

Dr. Hayes Newington, as Chairman, presented the report of the Parliamentary Committee as follows:—

The Parliamentary Committee begs to report—

1. That it has held several meetings to consider the Lunacy Bill.

2. That it has directed its endeavours towards the alteration or removal of the various points which have been objected to in former years. The principal ones are the shortening of the time of validity of an urgency order from seven to four days, and the pension provisions.

3. In regard to the latter, the Committee addressed a strong protest to the Lord Chancellor against his proposal to fix pensions absolutely to one sixtieth for each year of service. Since then the pension clause has been entirely withdrawn.

4. The Committee, while endorsing the principle of allowances in case of injury,

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.—For the Year 1898.

REVENUE ACCOUNT—January 1st to December 31st, 1898.

1897.	Dr. Expenditure.				1897.
£ s. d.		£ s. d.	£ s. d.		£ s. d.
497 15 10½	To Journal, Printing, Publishing, Engraving, Advertising, and Postage	545 13 5		By Dividends	10 10 6
	,, Examinations, Association Prizes, and Clerical Assistance to Registrar	73 3 1		,, Sale of Journal	204 2 4
75 5 9	,, Petty Disbursements, Stationery, Postages, &c.	50 12 2		,, Sale of Handbook	28 0 0
47 13 11	,, Annual, General, and Divisional Meetings ...	108 4 8		,, Advertisements	21 9 6
102 0 7½	,, Rent of Premises at 11, Chandos Street, care of Office, &c.	48 8 0			253 11 10
48 12 6	,, Audit and Clerical Assistance	6 6 0		,, Fees, Certificates of Psychological Medicine ...	44 2 0
6 6 0	,, Miscellaneous	77 14 11		,, Fees, Certificates of Proficiency in Nursing ...	90 8 0
39 3 1	,, Library	13 19 1			134 10 0
— — —			924 1 4	,, Subscriptions	558 1 6
70 19 7	Balance		32 12 6		
£887 17 4			£956 13 10		£956 13 10 £887 17 4

BALANCE SHEET—31st December, 1898.

1897.	Liabilities.				Assets.			1897.
£ s. d.		£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.	£ s. d.
49 13 6	Journal Account, balance of	32 10 11		Lloyds Bank:—Bankers	184 8 3			174 4 2
7 13 8	Petty Disbursements Account, balance of ...	4 16 3		New Zealand Stock:				
1 0 0	Examinations Account, balance of	15 13 0		£3½ per cent. value at this date	335 16 9			340 10 1
5 1 1	Meetings Account, balance of	0 7 6		Hack Tuke Memorial	340 7 9			353 7 10
4 5 7	Gaskell Fund	46 15 9		Sales Account, balance	142 2 4			115 13 4
— — —	Rent Account	18 8 0		Subscriptions Account, balance	113 18 6			90 16 6
— — —	Miscellaneous	2 10 0		Fees Account, balance	18 18 0			— — —
			121 1 5					
1106 18 1	Balance:—Balance on 1st January	1006 18 1						
	Add:—Balance of Revenue Account	32 12 6						
		1039 10 7						
	Deduct:—Decrease in value of New Zealand Stock £4 13 4							
	,, New Zealand Stock (Hack Tuke Memorial) 7 0 1							
	,, Subscriptions written off ... 7 7 0							
		19 0 5						
			1020 10 2					
£1074 11 11			£1141 11 7				£1141 11 7	£1074 11 11

T. SEYMOUR TUKE, } *Auditors.*
F. WOODINGTON, C.A. }

H. HAYES NEWINGTON, Treasurer.

as admitted in the Bill, has drawn attention to various objectionable matters in the application of that principle.

5. The Committee appointed a sub-committee of six of its members to confer with a sub-committee of the Parliamentary Committee of the British Medical Association. The joint-committee thus formed has also had several meetings, and resolved to endeavour to delay the passage of the Bill in its present form.

Dr. NEWINGTON continued.—I think we can all recognise one fact, namely, that it is the County Councils Association that is the body that stands in the way of pensions, and that it must be won over. It is proposed to call a meeting of the Parliamentary Committee within a reasonable time after the autumn holiday, to consider whether we should not write a letter to the County Councils Association, in order to raise the question. This would prevent the making of statements in Parliament which cannot be properly contradicted at the time. I really think that if we get to work in the autumn, and work on into the spring, we shall probably overcome resistance and obtain pensions.

In reply to Dr. Macdonald, Dr. HAYES NEWINGTON said:—The money (£20) voted last year, for the purpose of taking Counsel's opinion on one or two important points, if found desirable, was not spent, nothing having occurred to justify the proposed action.

Dr. MACDONALD.—I am sure we most heartily endorse what Dr. Newington has said about attacking the County Councils Association. I think the remarks which fell from the Marquis of Ripon ought not to be allowed to go without notice by us.

The PRESIDENT expressed their feeling of obligation to Dr. Hayes Newington for all he had done, and moved that the Report of the Parliamentary Committee be received and adopted. This was seconded by Dr. WHITCOMBE and became the finding of the meeting.

REPORT OF THE EDUCATIONAL COMMITTEE.

Dr. MERCIER having explained the position of affairs in regard to the Nursing Regulations, a long discussion ensued, in the course of which DR. ELKINS asked if the Metropolitan Asylums would be recognised as training schools for nurses and attendants, as hitherto there had been no power to admit nurses from those institutions to examination. He urged the claims of these nurses, and proposed that the Council be asked to recognise the Metropolitan Asylums as institutions for the treatment of mental disorders, within the meaning of the Regulations of the Association. He went on to say:—We admit to Leavesden Asylum a large number of general paralytics, at present about thirty being under care. There are many asylums that have no such number of general paralytics. Then we admit senile cases and between four and five hundred epileptics. Not only that, we have such a large number of suicidal and dangerous cases, that no less than thirty were sent to Leavesden Asylum during 1898. This means that, on account of the overcrowding in the London County Asylums, we sometimes have to keep suicidal and dangerous cases as long as from two to six weeks, and our nurses have to undertake the charge of these cases. I should also like to point out that I doubt whether any asylum in this kingdom can give better training than Leavesden or Caterham. The Association has already granted certificates to Rubery Hill Asylum attendants. I cannot tell why they should be recognised and Leavesden and Caterham not. The Rubery Hill Asylum only receives chronic cases, transferred from the Birmingham Asylum. I should also like to point out that in many of the large county asylums the training of some attendants is confined to the chronic blocks; they know nothing whatever about acute cases, and there is no proof that they do receive proper training. Private asylums are also admitted, yet many of them contain perhaps only forty or fifty patients, and these can hardly be considered as sufficient material for the nurses to be properly trained.

Dr. MACPHAIL.—I have much pleasure in seconding Dr. Elkin's motion, for I have always felt that the Association has treated the Metropolitan Asylums unfairly.

The PRESIDENT.—I did not intervene sooner, feeling that Dr. Elkins should have opportunity of stating his case to a full meeting of the Association; but I am bound to rule that, as the question was settled at the last annual meeting, it is incompetent for him to press his motion without giving due notice.

The terms of the regulations, left over for consideration from the last annual meeting were then fully debated, and adjusted as follows:

REGULATIONS FOR THE TRAINING AND EXAMINATION OF CANDIDATES FOR THE CERTIFICATE OF PROFICIENCY IN NURSING AND ATTENDING ON THE INSANE.

The Educational Committee shall be charged with the responsibility of seeing that the regulations made from time to time by the Association for the training and certification of attendants and nurses are faithfully carried out.

TRAINING.

1. A probationary period of three months is required to be served before an attendant is considered to have formally begun training.

2. Except as hereunder provided, every attendant must be trained in an institution for the treatment of mental disorders for not less than two years, including the probationary period, before he can become a candidate for examination. The two years must be complete on or before the date of the examination.

3. The Council may recognise any institution as an Institution for the Treatment of Mental Disorders for the purpose of these Regulations, and may determine with respect to any such institution, whether the whole period of training may be passed therein; or if not the whole, then what length of training in such institution may count as part of the two years required by Regulation 2.

4. In cases of exceptional character, in which a person has had large experience of nursing the insane, but has been unable, through no fault of his own, to comply precisely with these Regulations, application may be made to the Registrar to lay the circumstances of such case before the Council, which may, in its discretion, order that such candidate be admitted to the examination. Provided that every such application be accompanied by a recommendation from a member of the Association, and by evidence that the applicant has had experience of nursing and attending on the insane in an institution.

5. The system of training required by the Association consists of:

(*a*) Systematic lectures and demonstrations by the Medical Staff of the Institution. At least twelve lectures, each of one hour's duration, must be given in each year of training; and no attendant will be admitted to examination who has not attended at least nine lectures in each year.

(*b*) Clinical instruction in the wards by the Medical Staff.

(*c*) Exercises under the Head and Charge Attendants in the practice of nursing and attendance on the insane.

(*d*) Study of the 'Handbook of Nursing' issued by the Association. Other books may be used in addition.

(*e*) Periodical examinations, the nature and frequency of which are left to the discretion of the Superintendent, but one examination at least should be held in each year.

6. The scope of training must be such as to impart a knowledge (1) of the main outlines of bodily structure and function, sufficient to enable attendants to understand the principles of nursing, and of "first aid," especially with regard to the accidents and injuries most likely to occur among the insane; (2) of the general features and varieties of mental disorder; (3) of the ordinary requirements of sick nursing, and especially of the requirements of nursing and attending on the insane. For particulars see the syllabus of the examination.

EXAMINATIONS.

7. The candidate shall obtain from the Registrar a schedule, which shall be filled up and signed as required, and returned to the Registrar at least four weeks before the examination. The Registrar has no power to admit to examination any candidate whose schedule does not show that he has complied in every respect with these Regulations, and no such candidate will be permitted to enter for the examination. The schedule must be signed by the Superintendent or Acting Superintendent.

8. If, between the signing of such certificates as are required by the schedule, and the time of the examination, the candidate should be guilty of misconduct, such as if committed before the signing of such certificates, would have precluded

the granting thereof, such misconduct shall be at once reported to the Registrar, and by him be reported to the President. On such report the President may, if he think fit, order that the examination of a candidate be postponed; in which case he shall inform the Council at its next meeting, both of the fact and of his reasons for thus acting. The Council shall consider the matter, and may order that the candidate shall be refused admittance to the ensuing or any examination, and in that case shall give notice to the Registrar, who shall be empowered to return the examination fee, and shall take steps as shall in his judgment carry out the order of the Council.

9. Examinations for the purpose of granting certificates of proficiency to successful candidates shall be held by the Association under the following conditions:

(*a*) Examinations shall be held twice yearly, on the first Monday in May, and the first Monday in November.

(*b*) An examination shall be held at every Institution in which there are candidates.

(*c*) The examinations shall be partly written and partly *vivâ voce* and practical, the questions in each part being confined to the subjects in the syllabus.

(*d*) The papers shall be set, and the written answers examined by Examiners in Nursing appointed by the Association for this purpose.

(*e*) The examinations shall be conducted as follows: the written examinations, which must not exceed four hours in duration, shall take place on the days fixed, under the supervision of the Superintendent of the Institution, who is responsible for the observance of the Regulations.

(*f*) The *vivâ voce* and practical examinations shall be conducted by the Superintendent and a Coadjutor on as early a date after the fixed day as can be arranged.

(*g*) The Coadjutor shall be the present or past Superintendent or the Acting Superintendent or a Senior Assistant Medical Officer of not less than five years' standing of another institution, and must be approved by the President of the Association.

(*h*) The Coadjutor shall take a share at least as great as that of the Superintendent in the actual examination of candidates.

(*i*) Candidates must satisfy the Examiners in both departments of the examination.

(*k*) The Superintendent shall send to the Registrar after each examination a list of the candidates who have satisfied the Examiners in the *vivâ voce* and practical part of the examination.

Certificates.

10. Certificates of proficiency will be granted under the following conditions:

(*a*) The certificate shall be in the form appended.

(*b*) Certificates shall be dated, shall bear consecutive numbers, and shall be sealed with the seal of the Association.

(*c*) Certificates shall be signed by the Examiners, by the Examining Superintendent and his Coadjutor, and countersigned by the President and Registrar.

Register.

11. A Register shall be kept by the Registrar of the Association; and that Register shall contain the names of all persons who have received a certificate.

12. When a person registered has, either before or after he is so registered, been convicted before a court of competent jurisdiction in Her Majesty's dominions or elsewhere of an offence which, if committed in England, would be a felony or misdemeanour, or an offence under the Lunacy Acts then in force, or has been guilty of conduct which, in the discretion of the Council, renders such person unfit to hold a certificate, that person shall be liable to have his name erased from the Register.

13. It shall be the duty of the Superintendent or other member of the Association having knowledge of the facts to at once transmit a report of the circumstances of the case of a person alleged to be liable to have his name erased under Regulation 13 to the Registrar, who shall lay the same before the Council for

consideration, and on proof to the satisfaction of the Council of such conviction or such conduct as aforesaid, the Council may direct the Registrar to erase the name of such person from the Register and the certificate of such person shall be forfeited.

Provided that the name of a person shall not be erased on account of a conviction for an offence which, though within the provisions of Regulation 13, does not, in the opinion of the Council, either from the trivial nature of the offence or from the circumstances under which it was committed, disqualify a person from holding a certificate.

14. When a person holding a certificate is reported to the Registrar under the provisions of the preceding regulations, the Registrar, under the provisions of the preceding Regulations, shall forthwith send notice to such person calling upon him to show cause why he should not be dealt with by the Council, and shall transmit to him a copy of the following Regulation:

15. Any person holding a certificate who is alleged to be liable to have his name erased from the Register and whose case has been reported to the Council may make a statement to the Council either personally or in writing, but before any such statement will be received by the Council such person must deposit his certificate with the Registrar. In case the Council determine to take no action in the matter the certificate will be returned to such person. If any such person shall fail to deposit his certificate within fourteen days after receiving notice of this Regulation, and shall be unable to account to the satisfaction of the Council for the delay, such person shall be deemed to admit the truth of the charges made against him, and the Council may thereupon act as if the same had been proved to their satisfaction.

16. Any person shall be deemed to have received the notice required in Regulation 15 twenty-four hours after such notice has been posted in a registered letter to his last known address.

17. The Council may at any time direct the Registrar to restore to the Register any name erased therefrom in any case in which it may seem to them just or expedient so to do, or they may in any case direct the certificate to be suspended for a period in lieu of directing the name of the holder thereof to be erased.

Fees.

18. Each candidate is required to send 5*s.* with the schedule filled up and signed to the Registrar. In case a candidate fails to pass the examination the fee will not be returned to him, but he will be admitted to a subsequent examination on payment of a fee of 2*s.* 6*d.*

General.

19. These Regulations shall apply to all attendants who present themselves for examination after a date to be fixed by the Chairman and Secretary of the Educational Committee. [The meeting, having remitted to the Chairman and Secretary of the Educational Committee the fixing of this date, the same to be as early as possible having due regard to the avoidance of inconvenience, the date has been fixed at 31st October, 1900.]

20. In these Regulations unless the context be inconsistent therewith—

"The Association" means the Medico-Psychological Association of Great Britain and Ireland.

"The Council," "The President," "The Registrar," mean the Council, President, and Registrar, respectively, of the Association.

"Institution" means an institution for the treatment of mental disorders as defined in Regulation 3.

"Register" means the register of the names of holders of the certificate of competence in nursing and attending on the insane.

"Superintendent" means the medical superintendent of an institution for the treatment of mental disorder.

Words importing the masculine gender only include the feminine.

Certificate Referred to in Regulation 10 (*a*).

This is to certify that A. B., having been duly trained, has, after examination

by us, shown that he has attained proficiency in nursing and attendance upon the insane.

(Signed) ————————
————————
————————
————————
} Examiners.

———————— Examining Superintendent.
———————— Coadjutor.
(Countersigned) ———————— President.
———————— Registrar.

Dr. MERCIER read the following OPINION, which formed part of the Report of the Educational Committee:

"The position of the Council of the Medico-Psychological Association seems to be very similar to that of the General Council of Medical Education and Registration, although the latter is a statutory body. It has been repeatedly held that the functions exercised by that Council under regulations similar to those proposed being discretionary, and not merely ministerial, the Council are not liable to an action for the erroneous exercise of their discretion in the absence of *mala fides* and after due inquiry (see *Allbut* v. *General Council of Medical Education*, 23, Q.B.D. 400; *Partridge* v. *same*, 25, Q.B.D. 90; *Alinson* v. *same*, 1894, 1, Q.B. 750). If the Council be likened to the committee of a club, the same principle applies, and the court will not interfere against the decision of the members professing to act under their rules, unless it can be shown, either that the rules are contrary to natural justice, or that there has been *mala fides* in arriving at the decision (see *Dawkins* v. *Antrobus*, 17, Ch. D. 615; *Baird* v. *Wells*, 44, Ch. D. 666).

"The question of privilege would only occur (1) if the proceedings of the Council were published, and made the subject of an action for libel, when probably such report would be privileged (see Allbut's case, S.C.); (2) if an action for libel were brought against the superintendent or other member reporting the misconduct of an attendant to the Council. In such a case I am clearly of opinion that the report would be privileged. I have slightly recast the draft regulations sent to me with the view of making them more elastic, and more definite in their application. As now drafted they are generally on the lines of the Medical Act, 1858, and Dentists Act, 1879, which is an advantage, as those Acts have received judicial interpretation.

"(Signed) FRANCIS R. Y. RADCLIFFE.

"1, Mitre Court Buildings, Temple;
"*April 11th*, 1899."

Dr. McDOWALL proposed a hearty vote of thanks to the Educational Committee, and especially to its secretary, Dr. Mercier, for much time and thought expended in placing these regulations before the meeting. This was cordially approved.

REPORT OF THE LIBRARY COMMITTEE.

Dr. FLETCHER BEACH presented the report of the Library Committee as follows:—We beg to report that a "Catalogue of Authors" has been drawn up, and is in the hands of the publishers, and we have much pleasure in presenting a copy to the Association. A catalogue of "Subjects" will be drawn up shortly. We ask for a grant of £15 to cover cost of publishing the catalogue.

The PRESIDENT, having thanked Dr. Beach for the catalogue presented, proposed the adoption of the report of the Library Committee; Dr. Whitcombe seconded. It was agreed to, and the Committee, consisting of Drs. Rayner, Outterson Wood, Macevoy, and Fletcher Beach, was reappointed.

REPORT OF THE COUNCIL.

The Secretary read the following report:—The membership of the Association is 590: 540 ordinary, 41 honorary, and 18 corresponding members. Twenty resigned during the year, and five died.

Other Business.

Dr. Mercier withdrew the motion standing in his name relative to reporting the business of various meetings.

Dr. Carlyle Johnstone moved that the number of the direct representatives of the Association on the Educational Committee be increased, with the results reported on page 827.

Dr. Finegan withdrew his motion relative to the Irish Local Government Board, brought up from the meeting of the Irish Division, pending reports to be made to the Council to be laid before the next annual meeting.

Dr. Douglas asked whether the Association had empowered the co-operation of the British Medical Association to watch the progress of the Lunacy Bill next year, which would be a considerable assistance to both associations.

The President.—It was found in practice that a joint committee was rather difficult to work, but the committees of both associations have power to confer together.

Dr. Hayes Newington.—I take it that the Parliamentary Committee has power to take such steps as it thinks fit with regard to impending legislation.

Prize Essay.

The President having intimated that the prize had been awarded to Dr. F. G. Crookshank, who was unfortunately prevented from being present, the meeting was adjourned till the afternoon.

Afternoon Meeting.

Dr. Urquhart.—I desire, in vacating the Presidential chair, to end my year of office as I began, with an expression of hearty thanks to the Association. One does not undertake these duties without a very considerable amount of diffidence, thinking of the able manner in which they have been performed by those who have gone before; and there is also a smack of regret that it has been considered timely to enrol one among the seniors. I can only say for myself that it has always been my aim to serve the Association to the best of my ability, well aware that I should have that consideration and indulgence which has been my support during the many years of my official connection with it. To be voted to the office which I am now leaving is indeed very high honour. I retire with gratitude, to make way for one who has been to us a tower of strength. I do not need to introduce the President to you, for you all know what he has done for this Association. As Registrar he took up the work under some pressure, but he has brought it to a pitch of perfection. It is easy for Dr. Benham, comparatively speaking, to succeed to the position of Registrar, because the business has been reduced to system and method. It is particularly pleasing to me personally to have this opportunity of bidding Dr. Spence welcome to the Presidential Chair—to repeat our lively assurance of our confidence, esteem, and satisfaction in seeing him in the place which he is to occupy this afternoon. I ask him now to take the chair with the full knowledge of his great ability and high hopes of his future.

Dr. Blandford.—I wish to propose that this Association shall grant a vote of thanks to Dr. Urquhart for the admirable way in which he has discharged the duties of President during the past year. I need not dwell upon his virtues. You all know how much time and attention he has given to the office during that period.

Dr. Mickle.—I have much pleasure in seconding the vote of thanks to Dr. Urquhart. In him we have had a typically successful and good President. Not only has he been intimately associated with the Association's affairs for a very long time, but he is well known all over the world as one of the editors of our Journal, and as a leader in our specialty. In him we have one who is intimately acquainted with all the methods of controlling and guiding discussions, and I am sure that the fact that he attained great honour at an early age is one which gives us and must give him much satisfaction.

Dr. Spence.—I am sure that we who know Dr. Urquhart's geniality, great ability, and indefatigable industry will join now in offering him our very hearty thanks for the way in which he has carried out the duties of President during the past year. He has made it very difficult for any one to succeed him, so that all one

can do is to look back upon Dr. Urquhart's career in the chair and try and model one's course of conduct upon the admirable example he has set all who follow him.

Dr. URQUHART having acknowledged the honour, the PRESIDENT read his address (see page 635).

Dr. SAVAGE proposed, and Dr. T. L. ROGERS seconded, a vote of thanks to the President for his address, which was unanimously agreed to.

Dr. WHITCOMBE then described a case of rapid *ante-* and *post-mortem* decomposition (see page 758)

The Association held its annual banquet at the Whitehall Rooms, Hôtel Métropole, at 8 p.m., and had the honour of entertaining a number of distinguished guests.

MEETING OF JULY 28TH.

The PRESIDENT (Dr. J. B. Spence) took the chair, and called upon Dr. Mott to introduce a discussion upon "Syphilis in relation to Insanity" (see page 683).

The PRESIDENT then called upon Dr. Stoddart, who read a paper upon "Anæsthesia in the Insane" (see page 699).

The meeting adjourned at 1.45 p.m.

AFTERNOON MEETING.—At the Langham Hotel at 2.30.

The PRESIDENT called upon Dr. Mercier to introduce the subject of "Punishment the Painful Consequence of Conduct" (see page 724).

The PRESIDENT called upon Dr. G. E. Mould to read his paper upon "Insanity and Marriage" (see page 737).

Dr. MIDDLEMASS read a joint paper by himself and Dr. Elkins upon "Night Nursing and Supervision in Asylums" (see page 713).

Dr. SUTCLIFFE read notes on "Sulphonal" (see page 740), and the PRESIDENT closed the meeting

[Owing to the author's inability to be present, his arrival from America having been delayed, the paper promised by Professor C. H. Hughes, of St. Louis, on "Christopathia" was not read. We hope, however, to print it in an early number of the JOURNAL.—ED.].

Dr. URQUHART moved a vote of thanks to the President. This was seconded by Dr. CONOLLY NORMAN and agreed to.

The PRESIDENT.—I thank you very much, and I also offer my heartfelt thanks to those who really have been the mainsprings of the success—the Treasurer, Dr. Hayes Newington, has done an immense amount of work, as also has Dr. Robert Jones, the Secretary. I regret that a vote of thanks was not proposed to the Officers of the Association at yesterday's meeting for their services during the year, but I feel sure I may now say that we are all greatly obliged to them for the way they carry out their duties in the interests of the Association.

VISIT TO NORMANSFIELD.

The annual meeting of the Association finished in a very pleasant manner by a visit to Normansfield on Saturday, July 29th. It is to be regretted that so few members were able to avail themselves of the invitation of Mrs. Langdon-Down to visit her, and to partake of her hospitality. The party met at Richmond, and proceeded up the river in a steam launch. Dr. Reginald Langdon-Down took charge, and pointed out interesting spots to those not so familiar with the locality as he is. On arriving at Normansfield, the visitors were received by Mrs. Langdon-Down and Dr. Percival Langdon-Down, and conducted through the grounds and buildings. It is unnecessary to refer in detail to the many things of interest which there came under notice, but mention should be made of two villas which are occupied as preparatory schools by defective children. These buildings are quite separate from the rest of the institution, and the children do not associate with others worse mentally than themselves. Another villa is occupied by epileptic children, who are neither insane nor congenitally defective. The separation of these children from undoubtedly weak-minded cases marks a very important advance in the treatment of a most unfortunate class of persons, for the building

is really a school where special arrangements can be, and as a matter of fact are, adequately made for their education.

The company had lunch, and the President thanked Mrs. Langdon-Down for her gracious hospitality. Some members then returned to town, but the greater number proceeded on board the steam launch up the river, where a most enjoyable afternoon was spent.

IRISH MEETING.

A meeting of the Irish Division was held on Tuesday, July 25th, at Antrim Asylum, Dr. Hetherington, Londonderry, presiding. There were also present: Drs. Rambaut (Dublin), Dawson (Dublin), Nolan (Downpatrick), Wm. Graham (Belfast), S. Graham (Antrim), Amelia Grogan (Mullingar), Dorah Allman (Armagh), and Finegan (Mullingar), Hon. Sec.

The following were elected Ordinary Members of the Association:—Fitzgerald, James J., M.B., B.Ch., B.A.O.R.U.I., Assistant Medical Officer, District Asylum, Carlow (proposed by Dr. Thomas P. O'Meara, Dr. W. S. Gordon, and Dr. Grogan); Ellison, Fras. C., M.B., B.Ch., T.C.D., Assistant Medical Officer, District Asylum, Castlebar (proposed by Dr. E. M. Courtenay, Dr. W. S. Gordon, and Dr. Arthur Finegan); M'Kelvey, Alexander Niel, L. and M.R.C.P. and S.I., Assistant Medical Officer, District Asylum, Omagh (proposed by Drs. C. Hetherington, W. S. Gordon, and Arthur Finegan); Smyth, Walter, M.B., B.Ch., R.U.I., Assistant Medical Officer, County Asylum, Antrim (proposed by Drs. William Graham, W. Gordon, and Arthur Finegan); Patrick, John, M.B., B.Ch., R.U.I., Assistant Medical Officer, Belfast Asylum (proposed by Drs. W. Graham, W. S. Gordon, and Arthur Finegan); Graham, R. A. L., B.A., M.B., B.Ch., R.U.I., Assistant Medical Officer, Belfast Asylum (proposed by Drs. W. Graham, W. S. Gordon, and Arthur Finegan); Keegan, Lawrence Edward, M.D. (Univ. Dub.), L.R.C.P. & S.I., Medical Superintendent, Newfoundland Asylum (proposed by Drs. Conolly Norman, Henry Cullinan, and William Dawson); Kennedy, F. J., L.R.C.P. and S.I., L.M., Assistant Medical Officer, District Asylum, Enniscorthy (proposed by Drs. Thomas Drapes, W. S. Gordon, and Arthur Finegan); Allman, Dorah Elizabeth, M.B., B.Ch., B.A.O.R.U.I., Assistant Medical Officer, District Asylum, Armagh (proposed by Drs. George Lawless, Amelia Grogan, and Arthur Finegan); Allen, John Gower, L.R.C.P. and S.I., Part Proprietor, The Retreat, Armagh (proposed by Drs. Lawless, Gordon, and Finegan); Strangman, Lucia F., L.R.C.P. and S.I., L.M.Rot., Assistant Medical Officer, District Asylum, Cork (proposed by Drs. O. Woods, William Scanlan, and Arthur Finegan); Kirwan, J. St. L., M.B., B.Ch., T.C.D., Assistant Medical Officer, District Asylum, Ballinasloe (proposed by Drs. Fletcher, Mills, and Arthur Finegan).

The Secretary read several letters from members, regretting their inability to attend. The President of the Association wrote that he had been most anxious to attend, but at the last moment he found it was impossible for him to do so.

A letter was read from Dr. A. R. Turnbull, Secretary of the Scottish Division, drawing attention to the recommendation in regard to the payment of expenses of the Secretaries which the Scottish Division had formulated, for the consideration of the Council. Dr. Turnbull stated that the Scottish Division was unanimous in recommending the payment of the expenses of Secretaries, and that he had forwarded this recommendation to the various divisions in the hope of co-operation.

Dr. Finegan said that in this important matter he was sure the Council would be very much guided by the action that would be taken at the Irish Meeting. He though they should try to strengthen the hands of the Scottish members, with whom alone the question had originated.

Dr. Nolan inquired as to whether financial resources of the Association would warrant this, and as to the amount of means to credit.

Dr. Dawson asked what the expenses of the Secretary would be?

After further discussion, the Secretary having made some explanatory remarks,

Dr. Nolan said he thought they should defray the expenses of the Secretaries, and moved:—"That the expenses of the Divisional Secretaries of the Medico-

Psychological Association be paid out of the Association's funds, and that the said expenses be limited to a sum to be fixed by the General Council."

Dr. DAWSON seconded, and the resolution was carried unanimously.

PROPOSED REGISTRY FOR ASYLUM NURSES.

Dr. FINEGAN then submitted the following resolution, the adoption of which he moved: "That in view of the expressed determination of the Irish Local Government Board to assist in the provision of properly qualified nurses for the insane in union workhouses, it is desirable that the department afford facilities for registration of asylum-trained and certificated mental nurses on similar lines to that already established for hospital-trained nurses who may wish to serve under the Irish Local Government Board." Proceeding, the Secretary said he had better read the resolution passed by the Association at its last meeting in Dublin:—"Inasmuch as the Irish Local Government Board has declined to recognise the holders of the nursing certificates of the Medico-Psychological Association as being trained nurses within the meaning of 58 Vict., c. 2 (*a* ii) of the Local Government Act, and deems them ineligible to officiate as nurses for the sick poor in union workhouses, it is, in the opinion of this division of the Association, desirable that as long as the insane are retained in union workhouses attendants on the insane in such workhouses should be qualified by the acquisition of a certificate of proficiency in mental nursing equal in efficiency to that considered necessary for the nursing of the sick. Copies to be forwarded to the Irish Local Government Board and the Inspectors of Lunatic Asylums." What originated this resolution was the case of a highly qualified nurse, holding the certificate of the Association, who had applied for the position of nurse in a union workhouse. She was unanimously appointed by the guardians. She was an intelligent woman, and highly superior in every way. She remained there for three months, and at the end of that time the Local Government Board wrote to the guardians that they would have to dismiss this woman, as she was not a qualified or trained nurse. The guardians retorted that she was a trained nurse, and had been trained in a certain asylum in the district. The Local Government Board at once wrote to the guardians asking them to send copies of her qualifications. The certificate of the Association was forwarded, and the authorities acknowledged the receipt, but said they did not consider that was a certificate of a trained nurse. The result was that they immediately ordered her dismissal, although the medical officer of the workhouse gave her a certificate to the effect that she was the best trained nurse he had ever had in the institution. Then the resolution he had referred to was passed, and was sent to the Board along with a copy of the 'Handbook' of the Association, showing the nature of the examination which nurses must pass before they could get the certificate. The Local Government Board replied in the following terms:

"Local Government Board,
"Dublin; *May 11th*, 1899.

"Sir,—I am directed by the Local Government Board for Ireland to inform you that your letter of the 26th ult. has received their most careful attention, and that they are anxious as far as possible to assist in the object that the members of the Medico-Psychological Association appear to have had in view when they adopted the resolution of which you transmitted a copy for the consideration of the Local Government Board. "I am, sir,

"Your obedient servant,
"THOS. E. MOONEY, *Secretary*."

The inspectors, Mr. Finegan proceeded, also replied in similar terms. In view of this promise of the Local Government Board, they saw in all the local and medical papers advertisements relating to trained nurses. Unfortunately, at a certain Union, where they advertised for a nurse to look after the sick poor, and also for a person to look after the insane and imbecile in the workhouse, they offered for the trained nurse £30 a year, with full rations, while for the person who had to look after the insane they offered £6 per year. (Laughter.) Now the Local Government Board had put the following advertisement in all the papers:

"Local Government Board for Ireland.

"*Notice to Trained Medical and Surgical Nurses.*

"The Local Government Board for Ireland are about to open and keep a register for trained nurses, and a certificate as to the fact of a nurse's name being entered therein will be regarded by them as sufficient evidence of her professional qualifications for the post of trained nurse in any poor law union, infirmary, or district hospital.

"Until further notice the Local Government Board will, if it be so desired by any trained nurse on their register, notify to her the particulars of each appointment for a trained nurse that falls vacant in any Poor Law union or district hospital that falls vacant in Ireland.

"A form of application will be sent to any trained nurse who possesses a certificate of full training, and who may wish to have her name entered on the Board's register. "By order,

"Local Government Board, "Thos. E. Mooney, *Secretary.*

"Custom House, Dublin; *May 1st*, 1899."

Dr. Finegan, continuing, said he thought it was desirable, when the Local Government Board advertise for hospital-trained nurses and ignore the Medico-Psychological Association, and also in view of the determination of the Local Government Board to assist in the provision of properly qualified nurses in union workhouses, that the Department should also allow facilities for the registration of asylum-trained nurses on similar lines to that established for hospital-trained nurses who might wish to serve the Board. If that resolution were adopted by the Association it would be sent to the Local Government Board with the idea that the Medico-Psychological Association felt disposed to push the matter, and that they felt that the asylum nurses had been rather slighted and left out in the cold, leaving boards of guardians to do just as they pleased and employ intelligent persons at £6 a year instead of giving a proper remuneration. He thought this would elevate their nursing certificate and induce nurses to go in for it. He knew some nurses who said, What was the use of it? They got nothing by it, and if they got a post they were taken out of it. Outside asylums there was no benefit to be derived from it. He sincerely trusted the meeting would adopt the resolution. It had already been adopted elsewhere, and had borne fruit.

Dr. Nolan.—Am I right in taking it that a registry should be opened for asylum nurses, and is to be limited to nurses without training in a general hospital?

Dr. Finegan.—Precisely.

Dr. Nolan.—I would be quite at one with the Local Government Board in refusing to recognise our certificate as equivalent to a certificate of training in a general hospital.

Dr. Finegan.—Certainly.

The Chairman.—If the register is limited to mental nursing it is all right. The resolution is very clear on that point.

Dr. Graham thought that instead of supporting the resolution they should move a direct negative, and ask the Board to remove the insane from workhouses entirely.

Dr. Nolan.—That might be a supplementary resolution.

A lengthened discussion arose in connection with the expressed desire of the Local Government Board to restrict the training of nurses to certain asylums provided with large infirmaries, &c. [The Irish Local Government Board appears to assume the attitude of affecting not to understand that there is such a thing as mental nursing, or else of affecting to believe that mental nursing is taught in general hospitals. It therefore will recognise no nursing in asylums, except in institutions large enough to contain infirmaries of considerable size, with special provisions for general nursing.—Ed.]

Finally, Dr. Graham moved the previous question. The motion was not seconded. The original resolution was then put, and carried by one vote

A paper on "Remissions in General Paralysis," by Dr. Conolly Norman, was, in his absence, read for him by Dr. Daniel F. Rambaut.

Dr. Nolan said he had been hoping that Dr. Norman would have made some observations upon the medico-legal aspect of the cases. The speaker had known some instances where actual remission took place of some months'—one instance

of some years'—duration. In that case he believed the man had returned to live with his relatives again. In the first case mentioned in the paper remission would not be so important, because the patient was always emotional. Remission was merely clinical; but in the other case he is said to have gone to normal.

Dr. SMYTH.—Why should this first case be called a case of general paralysis at all. Was it not a case of tabes?

Dr. FINEGAN said they all knew general paralysis assumed many forms, but there was one general form which must come up, and that was a persistent form of exalted ideas that they had not in other forms of mental diseases.

Dr. GRAHAM.—That is only one form. You may have melancholic ideas. The delusions in Dr. Norman's first case were not persistent.

Dr. FINEGAN observed that he never saw in his life a case of general paralysis which was altogether melancholic. He had never seen a case of general paralysis without having some exalted ideas. That was his own experience, and he had had a great deal to do with general paralysis.

The CHAIRMAN and Dr. DAWSON also spoke.

Dr. RAMBAUT, in replying, observed that the definition of general paralysis was very vague. The first of Dr. Norman's cases had, of course, begun with tabes,—not an unusual thing in general paralysis—but nobody could claim the mental symptoms nor the disturbances of speech in that case as being merely phenomena of tabes. The case, of course, was one of tabetic general paralysis. Dr. Rambaut then read a paper on "Insanity with Bulbar Paralysis."

DR. WILLIAM GRAHAM (Belfast) read a communication on "Elementary Physiological Education: A Preventive of the Growth of Insanity." In the course of his remarks he said:—Perhaps among the many problems which modern science has formulated, none are of such practical and pressing moment, from a social point of view, as those which gather around the term hereditary. The theories of heredity are manifold, as to the fact itself, that we are largely the creation of the past, that our mental and moral furniture comes to us from our ancestry, that in the very nerves and tissues of our physical frame are the grooves along which a curse or a benediction wings its way—of all this no thoughtful man entertains the smallest doubt. There are some who talk as if there were a force resident in the nature of things making, whether we will or no, for the betterment of society, as if there were powers of evolution, invincibly leading us to a higher stage of social good. But we are beings, with the power of thwarting the beneficent energies of life, and if we do rationally co-operate with them we must expect decay and degeneration. Every truly educated man knows that marriage into a family in which the seeds of insanity lurk is an act at once culpable and foolish; but the vast majority are not educated. How are these to be restrained from propagating the awful curse of insanity, and handing down an entail of woe to succeeding generations? Ought they to be so restrained? Has society the right to suppress the harmful desires of the individual in the interests of the mass? If so, how can society best exercise this right? By coercion or educational means or by both? Any legislation that trenches on the liberty of the subject will not now be tolerated. As one has said: "I would rather see a nation drunk than sober by Act of Parliament." Within limits, this sentence expresses a fundamental truth of all sociological progress. Coercion, therefore, except in well-defined cases, may be set aside as impracticable. But surely no field for legislative enactment is so full of promise for good as that of education and discipline of the young. "Give me a clean canvas," said Plato, "and I will make a new world." He meant that if only he could get a generation free from inherited taint, social regeneration were an accomplished fact. But no such miracle is possible. Nevertheless, within the limits set by nature a great deal can be done. We teach our children the Ten Commandments; let us teach them that Nature also has her laws, and that she writes them in the thunders and lightning of her dread penalties. It is one of the scandals of our educational system that the children of our middle and lower classes grow up in absolute ignorance of the simplest laws of physiology. A future age will look back with wonder at the nineteenth century, in which children were crammed with geography and Latin derivations but left in darkness as to the constitution of their own bodies. Let us, then, insist that in our schools and colleges an elementary course in physiology, especially in its practical side, be compulsory for every pupil; and in this country where education is compulsory, it

will be well to add a compulsory dinner; for many children forced to cultivate the three R's, not on porridge, by means of which, it is said, the Scotchman acquires his metaphysics, but more frequently on weak tea and little bread with less butter. How many succumb to general paralysis caused largely by syphilis and drink? If they had been warned in their earlier years of the consequences of certain courses of conduct, it is only just to infer that large numbers would never have entered on the path that leads to lingering death. These unhappy persons are, to a great extent, the victims of a false educational method. Medical men are often consulted by educated persons as to the risk involved in marriage into an insane family, but in the humbler ranks of society such precautions are never even thought of, or, if thought of, desire overrides prudence. Were the youth of our primary schools taught the physiological facts underlying the phenomena of insanity and warned of the dreadful consequences of a violation of physiological law, the very suspicion of insanity would suffice to debar from marriage, and a gross social stigma would attach to anyone breaking down the barriers erected by a sound scientific sense and social feeling. Such a public sentiment is "a consummation devoutly to be wished for." A grave responsibility rests on legislators, schoolmasters, parents, clergymen, writers, and others in their dealings with the youth of both sexes. If these would join in the inculcation of rational principles of conduct in accordance with the dictates of nature—ere a generation had passed away a step forward in the well-being of the race would be taken.

Dr. FINEGAN thought that Dr. Graham had made a mark in producing a paper which was within the calibre of most of them. Dr. Rambaut's learned paper seemed to be beyond them. This was a practical subject, and one in which they were all much interested. He thought, however, that Dr. Graham had gone a little too far, and if his principles were adopted it would probably rob medical men of their bread and butter. It was said that a little knowledge was a dangerous thing, and he imagined that unless a sufficient knowledge of physiology was imparted to guide a man in the principles of life, it would be better for them to do nothing. The teaching of the sanitary laws, and the introductions into the elementary schools of some of the principles of sanitation, would benefit the general public more than a study of physiology. Physiology was a subject that, unless properly taught, was better left untouched. To get a clear knowledge of physiology was practically what a medical man required to know. Less than that would be of very little use to him.

Dr. GRAHAM said that by the principles of physiology he was speaking of it in its broader and wider view, and meant it to include hygiene and all forms of progress.

Dr. RAMBAUT stated that Dr. Graham had referred to the ignorance of the lower and middle classes. Which were the educated classes?

Dr. DAWSON ventured to think that the evils Dr. Finegan had painted in such dark colours were precisely the ones which would not arise if a knowledge of physiology was more widespread. What they complained about was that people had not a scientific spirit, and that they did not regard scientific subjects and the matters concerning them at all. He thought that with the spread of a little more knowledge that people, when they knew the dangers following upon a certain course of conduct, would only be the more likely to go to medical men.

Dr. GRAHAM said that as regarded the lower and middle classes, he meant the class that filled the district and county asylums. Some time ago he was asked to give a reason for the increase of insanity, and he went into the matter. He then found that the patients who filled his asylum in Armagh were those who came from the southern and western portions of the country—the uneducated people who could not read or write. It was people of this sort who increased the insanity by intermarrying. They felt no shame in marrying one who had been in the asylum, and they were in entire ignorance of the ordinary laws of nature. Dr. Graham added that the time would come when people would regard marrying into families tainted with insanity as a disgrace.

The CHAIRMAN, in closing the discussion, said that unfortunately they found a good many people marrying with their eyes open. Anything that would bring the subject of Dr. Graham's paper before the public would be a matter of benefit. He thought that masters of schools in many cases were specially behind in matters of this kind.

BRITISH MEDICAL ASSOCIATION.

Annual Meeting, Portsmouth, 1899.

Section of Psychology.

President: David Nicolson, C.B., M.D. Vice-Presidents: S. R. Macphail, M.D.; P. W. Macdonald, M.D. Honorary Secretaries: James Neil, M.D., Oxford; B. H. Mumby, M. D., Portsmouth.

The Section of Psychology had a highly successful meeting at Portsmouth under the genial presidency of Dr. Nicolson. On each of the four days the section was well attended, and the discussions were interesting and animated. The material available in the shape of papers was of ample amount; indeed, several important communications had to be taken as read for lack of time.

The business of the Section opened with the President's address, on the question "How can the reproachable Differences of Medical Opinion in Cases of Lunacy be obviated?" The cases in which these differences of opinion are liable to occur may be classified as (*a*) Ordinary lunacy cases, (*b*) Civil cases, (*c*) Non-capital criminal cases, and (*d*) Capital criminal cases. In the last two classes, malingering often acts as a complicating factor, adding greatly to the difficulty of diagnosis. Differences of medical opinion might be due to differences in experience and in carefulness of observation, or, in some cases, they might be attributable to prejudice. All medical men who sign certificates of lunacy should have had asylum experience in the study and treatment of mental disease. It was a deplorable fact that, owing to the absence of such experience among the body of general practitioners, cases of lunacy with suicidal, homicidal, or other dangerous impulses, passed largely unrecognised in the community. Too much stress should not be laid on the methods and measurements of anthropologists and criminalists as indices of character or of disposition towards crime. Sentiment should not be allowed to bias the evidence of independent facts. If due regard were paid to such considerations as these, differences of opinion among medical men as to the nature of lunacy cases, and as to questions of sanity and responsibility in alleged lunatics, would tend to be reconciled, or solved smoothly and harmoniously.

A vote of thanks to the President was proposed by Dr. Orange, who referred to the advice given by Sir James FitzJames Stephen that, when medical men were about to appear on opposing sides, in a case regarding a person's sanity or insanity, it would be well if they conferred together beforehand, regarding the medico-psychological aspects and facts of the case.

The formal discussions were three in number. The first was on lunacy legislation, as it affects the temporary care of incipient cases. It was opened by Dr. Savage, who criticised the provisions of the proposed Lunacy Act of last year in Clause 23, pointing out the desirability of extending some of the provisions of this clause as regards the certification, readmission, and care, as single patients, of incipient lunatics. The number of members who took part in this discussion showed the interest which it commanded in the speciality, for at the close of the meeting the discussion stood adjourned. It was resumed and finished next day. The general tendency of the opinions expressed was strongly adverse to the present prevalence of the clandestine treatment of insanity in private houses by incompetent persons, and a system of registration and supervision of those who undertake the private care of mental cases was advocated. Some of the speakers declared that only medical men should be allowed to have insane patients in private care, and one seemed to advocate that not even a medical man should be allowed to engage in this line of practice unless he could show that he had special experience of mental disease, and special training in the treatment of it.

The second discussion was on the evergreen subject of general paralysis.

Dr. A. W. Campbell opened with a paper on the "Ætiological Relations of Syphilis to General Paralysis." He contended that accumulated evidence, especially as collected and interpreted by Continental observers, has now proved it as a fact that syphilis is the great predisposing cause of general paralysis. He asserted that this fact formed a weighty additional reason for the legislative control of syphilis.

Drs. Macdonald and Davidson followed with a joint paper on cases of congenital general paralysis. These authors opposed Dr. Campbell's view as to the part played by syphilis in general paralysis, and held that the facts of their cases were against the syphilitic ætiology of that disease.

A prolonged discussion followed, and various views were expressed, but the general opinion appeared to be that the upholders of the syphilitic causation of general paralysis had not made out their case. One speaker who supported the syphilitic theory asserted that there was "an enormous increase of syphilis in the community," which, to his mind, accounted for the increase of general paralysis; but he brought forward no facts in support of his assertion regarding the enormous increase of syphilis.

On the last day of the meeting Drs. Shuttleworth and Fletcher Beach opened a discussion on the treatment of epileptics and imbeciles; sane epileptics only were considered, the insane being already provided for in the ordinary asylums. Dr. Shuttleworth dealt with the administrative aspect of the question. He pleaded for a more systematic provision by the Poor Law authorities for the class of sane epileptics. He remarked that the law made no provision in this country for the sane epileptic. He quoted the examples of America and Germany and other countries, where, by timely care, the sane epileptic was often prevented from becoming insane. The Craig Colony, New York, was the most notable of the American institutions for epileptics. Its system of housing was that of detached cottages spread over large cultivated grounds, and under medical direction. The great colony at Bielefeld, in Germany, was referred to as the pioneer colony in that country, which has been followed by several similar institutions at Alt Scherbitz, Wühlgarten, and elsewhere. The London County Council had decided to build cottages to accommodate 300 male epileptics upon 127 acres of ground, on which they would be employed. This will be an interesting experiment, and will no doubt form a precedent for other counties. The treatment at such institutions has done much good in ameliorating fits, and in improving patients generally, and the experience was that the patients seldom became insane. The patients find interest and useful employment in the institutions, and were saved from the temptations to which they most easily fall a prey—drink and sexual vice. The cost of maintenance was found to vary from £35 to £50 per head per annum, and it had been calculated that in a large institution it would be about £20. Provision for imbeciles was briefly referred to. In the metropolitan district there were three special institutions for imbeciles, with a total of 6000 beds. Outside the metropolitan area, however, accommodation for imbeciles was insufficiently provided.

Dr. Fletcher Beach discussed the treatment of sane epileptics from the medical point of view. This treatment varied according as the patients were at home, or in a hospital, or at a colony. He specially advocated the use of the bromides of ammonium and strontium as being less depressing than the bromide of potassium. When large doses were given he combined strychnine with the bromides to counteract the depressing effects of the latter. He favoured a diet from which the nitrogenous elements were excluded for a time. The combined treatment by diet and drugs gave, in his experience at the Chalfont Colony for Epileptics, the most gratifying results. Dr. Beach also pointed out that in the treatment of imbeciles great attention should be paid to the hygienic conditions under which they lived, and emphasised the fact that a good physical foundation must be laid before attempting to improve the mind. All epileptics should be emphatically advised not to marry.

A contribution to the discussion by Dr. Telford Smith was read in his absence.

Dr. Haig advocated a diet that does not form uric acid, composed of such foods as vegetables, milk, cheese, and macaroni.

Several other members and visitors took part in the discussion.

In addition to the three formal discussions, several valuable papers were read.

Dr. J. F. Sutherland (Edinburgh) read a paper on the urgency of legislation for the well-to-do inebriate. The Acts of 1879 and 1888 were, in a measure, provisions for dealing with inebriates among the lower classes of society who came under police cognisance, a measure also contemplated by the Act of 1898. But notorious drunkards existed in every parish among the better classes, whom the legislation of 1898 scarcely touched. Dr. Sutherland proposed that drunkenness *per se*

should be made an offence and should be punished by a fine or short imprisonment. At the conclusion of the discussion on Dr. Sutherland's paper a resolution was moved to bring the question under the consideration of the council of the British Medical Association.

Dr. Archdall Reid contributed a paper on "The Relation of Alcoholism to Heredity," in which the prevalent belief that the offspring of alcoholic parents were liable to suffer from the drink craving was controverted on *a priori* grounds. It was added that drunkenness in parents arose from some innate vice or from some internal blemish, and that the latter might reappear in the children in the form of some nervous or other disorder, but not as an impulse towards drink. From historical considerations it appeared that nations indulged in drink in an inverse ratio to the length and antiquity of their use of intoxicants.

Surgeon-General Harvey read notes on some of the asylums of India.

Dr. Lionel Weatherley read a paper on the question, "How can we instil rational ideas on the subject of Insanity into the public mind?"

Dr. Milne Bramwell read a paper on "The Conditions involved in the Post-hypnotic Appreciation of Time."

All these papers gave rise to discussion.

The following papers were taken as read on account of the absence of the authors or from lack of time: by Dr. Hyslop, on "Double Consciousness;" by Dr. Harry Campbell, on "Morbid Self-assurance;" by Dr. Macphail, on "Post-operative Insanity."

The interest in the work of the Section was sustained up to the last hour.

PARLIAMENTARY NEWS.

Treatment of Inebriates in Scotland.—*April 11th.*

The Lord Advocate, replying to a question by Sir John Leng, said that the local authorities in Scotland have been duly informed by the Secretary for Scotland as to the regulations formulated by him for the use of certified inebriate reformatories, but that as yet he had not received any applications for the appointment of such a reformatory. Her Majesty's Government proposed to defer the expenditure required for the establishment in Scotland of a State inebriate reformatory until experience has been had of the operation of the new legislation and the permanent demand it is likely that such an institution will have to meet.

Inebriate Reformatories.—*April 20th.*

Mr. Pickersgill asked the Secretary of State for the Home Department how many inebriate reformatories had been certified under the Inebriates Act, 1898, and how many of these had been established by county councils and borough councils respectively; whether any inebriate reformatory had yet been certified for men; whether several cases had occurred in which men who had been ordered by courts to be detained under the Act had to be discharged because there was no institution to receive them, and if so, what steps he proposed to take in order to prevent similar miscarriages in future; and whether any State inebriate reformatory had yet been established, and if not, what temporary arrangements, if any, had been made for the reception of persons committed under Section 1 of the Act.

Sir M. White-Ridley.—Three inebriate reformatories have been certified. No local authority has yet established a reformatory, but several are to my knowledge actively considering the question, which, I need scarcely point out, is not one that can be settled in a day. There is as yet no certified reformatory for men; but though I am officially aware of one case such as the hon. member mentions in the third paragraph of his question, and though there are probably a few others, I do not think I am called upon to take any steps. I am confident that magistrates will not, as a rule, commit persons under the Act until they know that provision exists for their reception into a reformatory. No State inebriate reformatory has been established. All the institutions already certified are, with one small exception, willing to receive persons committed under Section 1 of the Act.

IMBECILE CHILDREN.—*April 24th.*

Sir JOHN GORST, in answer to Sir U. Kay-Shuttleworth, said that the Government intended to bring in a Bill to deal with the recommendations respecting feeble-minded and defective children contained in the report of the Departmental Committee.

THE INEBRIATES ACTS.

Mr. HOBHOUSE asked the Secretary for State for the Home Department if he was aware that owing to there being at present no State or certified inebriate reformatory having accommodation for males, the Inebriates Act of last year is almost a dead letter, and what steps he proposed to take or recommend the local authorities to take to enable the Act to be put in force?

Sir M. WHITE-RIDLEY. - I cannot altogether agree with the suggestion in the first paragraph of the question. At the same time I should be very glad to see local authorities coming forward more readily, and assisting the operation of the Act, particularly as regards males, by either establishing reformatories themselves alone, or in combination, or by promising grants or contributions to private persons or associations who are willing to erect reformatories. As I have already stated, I do not at present feel justified in setting up a State reformatory, but I have secured substantial Government contributions for persons committed to certified reformatories. It is to these reformatories that in any case the largest number of committals would be made, and it is upon them that the effectiveness of the Act must mainly depend. I may add that I am collecting information from the police authorities throughout the country as to the number of persons within their districts apparently qualified for committal under Section 2 of the Act. When this information is complete, I propose in proper cases to draw the special attention of the local authorities to their responsibility in the matter.

Mr. HOBHOUSE.—Does my right hon. friend admit that at present there is no accommodation for males in any certified reformatory?

Sir M. WHITE-RIDLEY.—Yes, that is, of course, true. One or two of the arrangements which I had hoped would come into effect have broken down.

THE CASE OF MARY ANSELL.—*July 17th.*

Mr. DALZIEL asked, in the case of Mary Ansell, if consideration was given to the facts that her two sisters are insane, that all her mother's sisters died in asylums, that Dr. Forbes Winslow had pronounced his emphatic opinion that the prisoner was not responsible for her action, that no evidence on the question of insanity was produced at the trial, and whether he had objection to the publication of the report of the two experts appointed to inquire into the case.

Sir M. W. RIDLEY.—Following the course which has always been adopted by my predecessors, I must decline to lay before the House a report made for the purpose of assisting me in giving advice to Her Majesty, for which I alone am responsible. I may, however, state that all the circumstances of the case, including the family history of the convict, were most anxiously considered by me, as well as by all those who assisted me. The opinion of Dr. Forbes Winslow, who was, however, not consulted by me, was also before me, and was fully considered.

July 18th.

Mr. DALZIEL asked the Home Secretary whether his attention had been called to the foreman of the jury in the case of Mary Ansell having stated that, had the evidence in regard to the prisoner's insanity been put before the jury, his opinion was that they would have been unanimous in recommending a commutation of the death sentence; and whether he could postpone the execution pending an independent inquiry into the prisoner's sanity.

Sir M. W. RIDLEY.—I am satisfied, as the result of very full inquiry, and after consultation with the judge, that if the question of insanity had been raised at the trial, there is no evidence to that effect which could properly have affected the verdict of the jury. The answer to the last paragraph must be in the negative. It is my duty to protest against the insinuation which appears to be conveyed by the word "independent" in this paragraph.

Mr. DALZIEL.—I wish to be allowed to explain that the word "independent" means officers not retained by the Home Office. I also ask whether the attention

of the right hon. gentleman has been called to the fact that the prison chaplain has expressed his difficulty in deciding, and has, in fact, insinuated that in his opinion the girl does not understand the gravity of her crime.

Sir M. W. Ridley.—Every single point which has been alluded to by the hon. member has been fully within my knowledge during the last week, and I have given each of them my best consideration.

Medical Examination of Convicts Sentenced to Death.—*July 22nd.*

Sir M. White-Ridley, replying to Mr. Yoxall, said the discretion of the medical men whose opinion was obtained by the Secretary of State from time to time in regard to the mental condition of convicts was not restricted in any way by a form of questions. In the case of an inquiry into the mental condition of a convict under sentence of death, he proceeded in accordance with Section 2 of the Criminal Lunatics Act, 1894. Any medical man forming an opinion on a question of this kind must take into account the facts of the convict's family history, and all available evidence on this point was placed before the medical man in charge of the inquiry. They were expected to report on all the aspects of the case, including the past history of the convict, as well as his state of mind at the time the crime was committed and at the time of the trial.

The Inebriates Act (1898) Amendment Bill.—*July 26th.*

Mr. Caldwell said that the Act of last year applied not only to England but also to Scotland and Ireland, but this amending Bill related to England only. Why should there not be a corresponding amendment applicable to Scotland and Ireland?

Mr. Jesse Collings said that Ireland and Scotland were not affected in the same manner, and, therefore, the bill did not prejudice them.

Mr. Pickersgill gave notice of amendment, viz. "That this House declines to proceed with the Bill until the means have been provided for putting into operation the Inebriates Act, 1898." The object of Mr. Pickersgill was to draw attention to the unsatisfactory state of things, in which magistrates find it impossible to exercise their powers under the Act.

The Inebriates Act (1898) Amendment Bill (*March 4th*) is designed to remedy omissions in last year's Act. It was necessary to bring in this measure to provide that the expenses of prosecutions under Section 2 should be payable as in cases of felony. This is the object of the first clause; the second gives power to deal summarily with breaches of the regulations made by the Secretary of State with respect to inebriate reformatories. The Home Secretary has promised to consider the appointment of a woman inspector, should it become necessary, in addition to the medical man who has already been appointed.

The Treatment of Criminal Lunatics.—*August 7th.*

Mr. Arthur O'Connor asked the Home Secretary if he had yet had an opportunity of considering the representations of the Lunacy Commissioners with regard to the increasing numbers of criminal lunatics in county and borough asylums, and to the hardship which the practice inflicts upon the ordinary patients, and the indiscipline and danger which it involves; whether Broadmoor was fully occupied; and whether further accommodation could be furnished, so as to enable criminal lunatics to be treated elsewhere than in ordinary asylums.

Sir Matthew White-Ridley.—The question of providing additional accommodation for criminal lunatics is engaging my serious attention, and inquiries are now in progress with a view to obtaining a site for the building of a new criminal lunatic asylum. I propose in the course of the autumn to make the necessary application to the Treasury. The male accommodation at Broadmoor is fully occupied, but there are still vacancies for females at that establishment. It is intended that accommodation in the new asylum shall be provided both for male convicts becoming insane as well as the other more serious cases of criminal lunatics, but of course it will in no case be possible to relieve altogether county and borough asylums from their statutory obligation to receive criminal lunatics.

RECENT MEDICO-LEGAL CASES.

Reported by Dr. Mercier.

[The editors request that members will oblige by sending full newspaper reports of all cases of interest as published by the local press at the time of the assizes.]

Reg. v. *Peterson.*

The Biddenden Tragedy.

Bertha Peterson, 45, daughter of the rector of Biddenden, was indicted for the murder of John Whibley. The deceased, a shoemaker, had been a teacher in the Sunday-school of Biddenden, and there had been rumours, eighteen months before the murder, of his having behaved indecently towards a little girl of eleven. The prisoner was much interested in the rumour, was a disciple of Mr. Stead, took a great interest in the Criminal Law Amendment Act, and appears to have allowed her attention to be absorbed in these subjects, until she became even more crazy than the general run of the nasty-minded apostles of purity. She purchased a revolver and practised with it. She wrote to the deceased expressing her regret for the mistaken attitude she had adopted towards him, and asking him to meet her in the parish schoolroom in the presence of witnesses and shake hands as a token of forgiveness. The meeting took place, and then, asking deceased to take a good look at a picture on the wall, she placed the revolver to the back of his head and shot him dead. Evidence was given of various eccentricities in the previous conduct of the prisoner, and Dr. Davies, Superintendent of the Kent County Asylum, and Dr. Hoare, surgeon to the Maidstone Gaol, in which the prisoner had been detained pending her trial, stated that in their opinion the prisoner was under the hallucination that she was ordered to shoot the man. At this point the judge interposed and invited the jury to stop the case. The jury preferred to hear the commencement of the speech for the defence, but before its conclusion they returned a verdict of guilty but insane.—Maidstone Assizes, July 12th, Mr. Justice Mathew.—*Times*, July 13th.

This case aroused considerable interest at the time of the murder. It is another instance of the exaggerated effect that any emotional propaganda may have upon persons of unstable brain. The unfortunate woman's mind was obsessed by the pseudo-revelations of Mr. Stead's pornography, and her crime was the result of her obsession. The ease with which the plea of insanity was established is rather remarkable in consideration of the elaborate premeditation and contrivance exhibited by the crime.

Reg. v. *Ansell.*

Mary Ann Ansell, 18, domestic servant, was indicted for the murder of her sister Caroline Ansell, a patient in Leavesden Asylum. The prisoner insured the life of the deceased for £22 10*s*. Early in the present year prisoner purchased several bottles of rat poison, saying that her mistress had sent her for it. On February 22nd deceased received by post a parcel containing tea and sugar, but when used they were found to have a bitter taste, and were thrown away. On February 24th deceased received a letter containing the false intelligence of the death of her father and mother, and purporting to be signed by a cousin, who, however, denied having sent it. On March 9th deceased received by post a jam sandwich, which she shared with two other inmates. All three were taken very ill, and Caroline Ansell died. The prisoner advised her father not to allow a *post-mortem* examination to be made, and, with his consent, wrote a letter in his name forbidding the examination. The prisoner's mistress denied having sent her for rat poison, or having used rat poison.

The plea of insanity was raised on the ground that although the prisoner had never been insane she had several relatives in asylums, and Dr. Forbes Winslow was the only medical man who could be found to say that the prisoner was irresponsible. The jury found the prisoner guilty. After the trial a considerable agitation was raised for the reprieve of the prisoner, and pressure was even

brought to bear upon the Home Secretary by means of questions in Parliament with this object. The Home Secretary did not interfere, however, and the girl was hanged.

We are clearly of opinion that the verdict, sentence, and action of the Home Secretary were right. A more deliberate and cold-blooded murder has seldom been committed for a more sordid motive. The deed was planned with cunning and carried out with merciless cruelty. Of evidence of insanity on the part of the prisoner there was not a shred. It was said that she had several insane relatives, but this was denied by her father; and, even if it were the fact, it is utterly out of the question that every person with an insane heredity should be held immune from punishment. Such a practice would be intolerable, as well as most unjust. That a medical man could be found to express an "emphatic" opinion of the prisoner's irresponsibility is much to be regretted, but it is satisfactory to find that no alienist could be found to endorse that opinion.

Reg. v. *Kershaw.*

Robert Kershaw, accountant, was charged with shooting at Agnes Kershaw, his daughter, with intent to murder. Prisoner came into the room in which his daughter was sitting, and saying "Are you my daughter?" shot her in the face with a pistol. It was proved that the prisoner at the time was under the influence of drink, that he had long been addicted to drink, that he had for years cherished against this daughter a hatred, which appeared to have begun by seeing her portrait, among those of other art students, taken in a room in which were nude statues. Dr. Bevan Lewis, who had examined the prisoner five weeks after the crime had been committed, was of opinion that there was no evidence of insanity at the time of the examination, but that at the time of the crime the prisoner was suffering from acute alcoholic delirium. The judge told the jury that before they found the prisoner of unsound mind they must be satisfied that the symptoms were not those of ordinary drunkenness. Guilty. Seven years' penal servitude.—Leeds Assizes, May 13th, Mr. Justice Bucknill.—*Times*, May 15th.

It is settled law that drunkenness is no excuse for crime. Drunkenness is temporary insanity voluntarily induced. The same description applies to delirium tremens and to *mania a potu*. Yet it would be manifestly unjust to punish for a crime committed in delirium tremens, and it is manifestly not unjust to punish for crimes committed during drunkenness. Cases of crime committed in intermediate states must be judged upon their individual merits. In this case there is no doubt that the criminal was an habitual drunkard, and that he was not completely sane at the time of the crime, his sanity being impaired by his drunken habits. Had the shot been fatal, it scarcely admits of doubt that the prisoner would have been found insane. Under the circumstances a sentence of seven years penal servitude appears to be full measure, pressed down, and running over. Although the prisoner did undoubtedly deserve a severe punishment, it is submitted that he should not have been punished with full severity as a completely sane person.

Reg. v. *Sutton.*

Henry Sutton, 18, marine, was charged with shooting a comrade named Davis. The prisoner, who had been in the service a year, was on sentry duty on a bright moonlight night. On the guard coming to relieve him he fired at them four shots, one of which hit Davis. When arrested he was sober, and said that he did not know why he fired the rifle, nor even how he came to load it. He had no right to load the rifle without orders. At the trial he gave evidence that a day or two after the event all recollection of the details had left his memory, and he still remembered nothing about it. For the defence it was suggested that there had been a story current in barracks about a ghost, which was said to have been seen near the place where the prisoner was stationed, and that when he saw the guard he fired the rifle in terror, thinking that he saw the ghost. The judge pointed out that although the prisoner immediately after the act said that he knew he was firing at the relief party, but did not know why he did so, no plea of insanity was raised nor any such defence set up. The jury found the prisoner guilty, but recommended him to mercy on account of the ghost scare, and the prisoner was released upon

his own recognisances.—Winchester Assizes, June 27th, Mr. Justice Wright.—*Times*, June 28th.

Probably the view of the jury was the correct one. The prisoner had his mind saturated with the ghost story, and seeing the relief approaching, he betook himself in panic to his weapon. The plea of insanity was not raised, but the case is important because the prisoner pretended that he lost all recollection of the circumstances a day or two after they took place. Such a forgetfulness is incredible, and was no doubt assumed in order to raise a presumption that he was irresponsible at the time. Such pretended forgetfulness is not at all uncommon, and may, when less clumsily assumed than in this case, mislead a medical man. It is well to bear in mind that the statements of a prisoner accused of crime, even if they support an hypothesis of insanity, are not necessarily true.

Reg. v. *Hough.*

Alice Hough, 39, married, was charged with the murder of her child. She was found standing with it in a sheet of water. Both were taken out, but the child was dead. Prisoner had been an habitual drunkard for years, and had had several attacks of delirium tremens. The judge expressed the opinion that the case had not been presented in a satisfactory manner. He had drawn attention to it in his charge to the grand jury, and had expressed the hope that steps would be taken to put proper evidence before the court as to the mental condition of the prisoner. This had not been done, and they were left to make the best of the imperfect material before them. He deprecated in the public interest such treatment of a serious charge. Guilty, but insane.—Manchester Assizes, July 12th.—*Manchester Guardian*, July 13th.

Interesting as showing that the practice of placing, by the prosecution, of evidence of the prisoner's mental condition before the court is so well established, that a judge severely comments upon the omission.

Cathcart v. *Cathcart.*

The husband of the well-known Mrs. Cathcart sought a divorce on the ground of desertion. The proceedings were protracted, and occupied the Court of Session for three days. The only matter of interest to our readers is that Lord Low expressed a strong opinion that Mrs. Cathcart, when she left her husband, was of unsound mind. Since that date, however, a jury had found that she was sane, and in spite of this she had resisted all the entreaties of her husband to rejoin him. Although, therefore, he intimated that he would not have granted a divorce for a desertion for which the defender was not responsible owing to her unsoundness of mind, yet, as this desertion had been endorsed and continued by her after her restoration to sanity, she lost the benefit of her irresponsibility at the time of the desertion, and lost also her case. Judgment for the pursuer.—Lord Low.—*Scotsman*, June 17th, 28th, and 29th.

re *Jackson.*

In an inquisition upon a lady named Miss Eleanor Jackson, it was proved that she alleged that people were hostile to her, and wanted to get hold of her property, and that under the influence of these delusions she was in the habit of writing letters to the Queen, the Lord Chancellor, the police, and various other persons. The jury found that the lady was incapable of managing her affairs, but was not dangerous to herself or others, the result of which verdict was that she was at once placed at liberty.

If juries persist in placing at liberty persons with delusions of persecution, it is certain that before long a tragedy will be placed to the charge of Section 98 (2) of the Lunacy Act, 1890.

Reg. v. *Allman.*

Prisoner, a nursemaid aged 15, was charged with causing the death of her employer's child, aged four. Some time before the death with which the prisoner was charged, her employer had lost another child, who was found drowned in a deep pool on the farm in which he lived. The prisoner was not suspected of having any part in the death of this child, but when the second child was found drowned in the same pool, she was questioned, and as she made several statements

quite inconsistent with each other, she was charged with murder, but at the instance of the judge the charge was reduced to one of manslaughter. The jury found the prisoner guilty.—Shrewsbury Assizes, July 16th, Mr. Justice Day.—*Manchester Guardian*, July 17th.

This case recalls vividly the Road murder which caused so much excitement in the country nearly thirty years ago. In that case the criminal, a sister of the victim, was 16 years of age. These apparently motiveless crimes committed by girls about the age of puberty form a very well characterised class. Sometimes, as in this case, the crime is that of homicide. Often it is incendiarism. Occasionally it takes the form of sexual tamperings with younger children. In this case the evidence against the prisoner was very indirect, and there is no doubt of the wisdom of the discretion exercised by the judge. Indeed, it is rather surprising that a conviction was secured even upon the lesser charge. The plea of insanity was not raised, counsel hoping, no doubt, for a general acquittal, but the case was certainly a legitimate one for urging mental unsoundness in mitigation of punishment, having regard to the age of the prisoner, and the circumstances of the crime. Unfortunately the report to hand does not record the sentence.

Colclough v. *Ollivant.*

A breach of promise case, the plaintiff being a widow over 40, the defendant a weak-minded man of 25. The formal defence was a denial of the promise, but practically the matter resolved itself into the question whether the plaintiff took advantage of the defendant's weakness of mind to entrap him into an offer.—Verdict for the defendant.—*Manchester Guardian*, July 25th.

ASYLUM NEWS.

Aberdeen Royal Asylum.—Extensive damage was caused by fire breaking out in the roof of the succursal asylum at Glack, which is some twenty miles from Aberdeen. About 100 patients are accommodated there, mostly of the quiet class, who are employed on the estate, which was acquired some ten years ago. Fortunately the water supply was ample, and, the safety of the patients having been secured, the lower storey was saved from destruction. The staff earned high commendation in having dealt so efficiently with the catastrophe. We trust that the chapter of accidents from fire in the Aberdeen Asylum is now closed. It has been most unfortunate of late years in this respect.

Forfarshire Asylums.—For years past there has been an agitation going on in Forfarshire in connection with the asylums of the county. The parochial authorities of Dundee have been urgent in claiming that they should have the management of the insane, because they represent the ratepayers. The town clerk of Dundee attributed their desire to a lust of administration, and made short work of their arguments. The agitation has been fostered and has spread to other parts of the county, and the local newspapers have printed long reports of meetings convened to reorganise the system of lunacy administration. It does not appear that the difficulties are insuperable, if the parties in the dispute are willing to modify their extreme demands. The directorate of the Dumfries Royal Asylum was lately reorganised by Act of Parliament, and popular representation was granted, without having impaired the efficiency of the institution. Similarly, the Forfarshire Asylums might be relieved from the uncertainties and irritation of this long-continued agitation, and might continue their beneficent work unmolested. It is unfortunate for the insane belonging to the extreme north of Scotland that they should still require to seek treatment in asylums so distant as Montrose and Edinburgh. The question of their retention in Montrose has been raised, and will no doubt have most serious attention in the near future, for it is evident that lunacy affairs in Forfarshire cannot be allowed to drift in the present entanglement much longer.

Northampton County Asylum.—The authorities of the Northampton County Asylum announce that arrangements have been made to afford free consultation with the doctors at the asylum to those whose symptoms suggest incipient mental

disease. The person applying will be regarded as an out-patient of the asylum, and the only charge will be the cost price of any medicine the medical staff may think desirable to supply. This has been done on the initiative of the Duke of Grafton, who is on the Committee of Visitors. While expert advice should be freely tendered to the poorer classes by the medical staffs of our asylums, it seems to us a doubtful policy to supply medicines at cost price. Nourishing food and other medical comforts are just as often required as medicines; and it is important to enlist the co-operation of the general practitioners, who are more constantly in touch with such patients than the asylum physicians can be. For obvious reasons, we should have preferred to have learned that the place of consultation had been fixed at the local hospital, as has proved so successful in other places. The arrangements now made may, however, develop in that direction; and we heartily support the principle of assistance to incipient cases at the hands of physicians exceptionally well qualified to give the aid so much required.

Down District Asylum.—A new wing has been opened at this asylum. It has been designed as a male infirmary, equivalent to the similar wing for women which has been for some time in occupation. The male infirmary can now accommodate fifty-six patients instead of fifteen as before—that is equal to 20 per cent. of the whole male division. Very considerable additions and improvements have also been made in the administrative parts of the building. At the last meeting of the Board of Governors, now replaced under the new *régime*, Dr. Nolan and Dr. Clark had the honour of being specially thanked in a complimentary minute.

Utica State Hospital.—This historic institution has lost the distinguished services of Dr. Alder Blumer. His many friends on this side will learn with interest that he has accepted the appointment of Physician-Superintendent to the Butler Hospital for the Insane, at Providence, R.I. On taking his farewell, Dr. Blumer said that, on being offered the appointment to a hospital held in such high esteem and famous since the days of Isaac Ray, he had to carefully consider the sacrifice he made in leaving Utica. He felt bound to go in his own interests and those of his family. Dr. Blumer concluded with an eloquent survey of the period of his service in New York State, and expressed his thanks to the managers for their rich sympathy and strong support. The managers accepted Dr. Blumer's resignation with great reluctance, and recorded their feeling that he had proved an ideal superintendent. We congratulate the Butler Hospital on having secured the services of one who is so highly esteemed at home and abroad, and hope that Dr. Blumer will see many and happy years of service in his new appointment.

THE EMPLOYMENT OF EPILEPTICS.

The Duke and Duchess of York visited Chalfont St. Peter, on the 23rd June last, to open four new homes at the Colony of the Society for the Employment of Epileptics, of which his Royal Highness is president. These new homes increase the existing accommodation by nearly 100 beds. The Duke of York having declared them open, reviewed the history of the Society, and recounted what had been done elsewhere. The donors were thanked on the motion of Sir William Broadbent, and Mr. J. Passmore-Edwards replied.

THE CARE OF THE FEEBLE-MINDED.

This important development of philanthropy is making headway in a very remarkable manner. The Lancashire and Cheshire Society for the Permanent Care of the Feeble-minded met in Manchester in May, when Miss Dendy, who has given great impetus to this particular association, addressed those present in a long, interesting speech, which was fully reported in the *Manchester Guardian*. Miss

Dendy intimated contributions to the sum of £1750, with further conditional promises. It was further stated, at the meeting of the Homes of Industry for Feeble-minded Girls, that the earnings of the inmates of the two homes already in operation, amounted to £312 out of an aggregate income of £994.

The Annual Meeting of the National Association for Promoting the Welfare of the Feeble-minded was held on July 8th. An address on the state of matters in Italy from this point of view concluded with an appeal for alliance between the two countries in prosecuting this new crusade. After the meeting the cottage homes were inspected, and the methods of training and teaching were shown. This association is rapidly extending its operations, and proportionately requiring financial support.

The Bill to be introduced into Parliament will probably be drafted on the lines recommended by the Departmental Committee of last year.

That committee recommended that legislation in the case of these children should very much follow the precedent set in 1893, when an Act of Parliament was passed for the education of blind and deaf children, the duty being cast upon school boards or other school authorities "to make such arrangements as the Education Department may approve for deciding (*a*) what children resident in their district, not being imbecile, are, by reason of mental or physical defect, incapable of receiving proper benefit from instruction in ordinary schools; (*b*) what children are unfit, by reason of severe epilepsy, to attend the ordinary schools." Such provision to be made in the case of defective children—"(*a*) by means of day classes certified for the time being by the Education Department as special classes; or (*b*) by boarding out, subject to the regulations of the Education Department, in a home conveniently near to a special class; or (*c*) by a home for defective children certified by the Education Department; and (in the case of epileptic children) (*d*) by a home for epileptic children certified by the Education Department." The school authorities are to have full powers to provide for the maintenance of such classes and homes; the children to be dealt with shall be over seven years of age, and the compulsory education will extend to the age of sixteen. Several school boards have already special centres for the instruction of feeble-minded children of an entirely voluntary character. The proposed legislation will make the provision incumbent on the Boards wherever required. The Government will no doubt give special assistance by grants of money towards the cost of the education, as recommended by the London School Board in a recent memorial. It is calculated by the Departmental Committee that about 1 per cent. of the children of the elementary school class appear to be feeble-minded. The special legislation in the case of blind and deaf children has been thoroughly carried into effect throughout the country; and, with the powers now sought to be conferred on the school boards and other authorities, there is every reason to believe that a like happy result will quickly ensue in the case of children who are mentally deficient or who suffer from epilepsy.

THE INEBRIATES ACT, 1898.

The Inebriates Act of 1898 has been placed on the Statute Book, but the results are as yet disappointing. The fact is that the machinery is still incomplete; and, as drunkenness continues rampant, obvious failures must occur in administration. It has been enacted that drunkards, convicted four times within one year of certain specified offences, may be sent to an inebriate reformatory and detained there for three years. The Home Secretary has explained that it is not intended that these institutions should be erected by the Government, at any rate in the first instance; although contributions in aid of maintenance will be granted Rules have been made for these reformatory institutions, and have come into effect in the United Kingdom and Ireland; but we are not aware that any such certified reformatory exists in Scotland or in Ireland, while those which have been certified in England are manifestly insufficient to meet the immediate demands on their accommodation. We note that the Royal Victoria Homes at Bristol have been certified for 60 women; Lady Henry Somerset's Homes at Duxhurst for 12 women; at St. Joseph's Homes at Ashford for 56 female Roman Catholics. There is immediate need of a

reformatory for men, and the Inebriate Reformatory Committee (32, Charing Cross, S.W.) appeal for funds, not to relieve the counties of their obligations, but to meet the pressing wants of the day.

Many cases have been reported showing that the law is being brought into disrepute by the inability of existing homes to receive the persons sentenced. For instance, on the 14th July, the *Times* reports that Annie Bennett was ordered to be detained at Duxhurst for twelve months, and it was found later in the day that there was no room for her. The Chairman of the County of London Sessions said that the Act was practically a dead letter.

In February last the London County Council appointed a committee to submit a scheme whereby the powers conferred by the Act might be exercised. The committee was to consider whether it would be better for the Council to erect a new building or to acquire one already erected. A provisional estimate was given that a reformatory for 100 inmates would cost from £14,000 to £22,000, according to the character of the building. From inquiries previously made it appears that it is not improbable that during the first year about 100 males and 200 females will be dealt with under the Act. They were also to consider whether the Council should contribute towards the establishment or maintenance of a retreat for the reception of persons who, being habitual drunkards but not convicted, are willing to place themselves under care for a period. As the Council under the new Bill has become the licensing authority for retreats in London under the Act, it is directed to report also as to what committee should be referred the duty of considering and reporting on applications for licensing for retreats.

In June, Dr. Collins, the Chairman, presented a report setting forth the state of matters, and stating that they recommended that the Council should establish their own reformatory, although temporary arrangements might be made with existing reformatories. This course has been adopted with the Duxhurst and St. Joseph's Homes for a year.

A conference of the Lancashire County and Borough Councils was held in June, when the chairman, Sir John Hibbert, moved that it was desirable that one inebriates' home for men and two for women should be established for Lancashire. The motion was carried unanimously.

The National United Temperance Council met in July, and it was reported that £2000 had been offered to build an inebriate reformatory, so that the matter would receive immediate consideration.

The counties contributing to the Bristol Homes are Gloucester, Warwick, and Worcester. Dr. Cotton, a member of the Medico-Psychological Association, was appointed medical officer and has given careful attention to his duties. The rules of the Secretary of State prescribed that he should live within two miles of the institution; but considering the chaotic condition of affairs this has been wisely relaxed until the numbers reach 100.

Notwithstanding the activity manifested in these various quarters it is to be hoped that the Government will lose no time in assisting to remedy the present unsatisfactory state of matters by the erection of a model State institution in each of the three divisions of the kingdom. Such an institution should be largely self-supporting when the initial cost is met, and the money could not be more wisely spent. The Government is assuredly, without loss of time, bound to relieve the law courts from the stigma of unfulfilled sentences.

OBITUARY.

Serafino Biffi.

The death has lately been announced of Dr. Biffi, who, next to Verga, with whom he was closely associated, may be regarded as one of the founders of modern Italian psychiatry.

Serafino Biffi was born at Milan in 1822 and studied medicine at Pavia. As a student he took special interest in experimental work, which was then an entirely new method, and was still a student when, with Morganti, he published his researches demonstrating the function of the lingual nerve and his experiments on the innervation of the iris. After graduating with honours he turned from e xperi

mental work to devote his energies to the ordinary clinical duties of an assistant at the University of Pavia. In 1848, however, he accepted the post (in succession to Verga) of assistant at the Casa privata dei Pazzi at San Celso, in Milan, and from that time he gave himself entirely to psychiatry. He became Director of San Celso in 1853, and henceforth took a leading part in all that concerned the advance of psychiatry, alike on the scientific and the practical sides. He advocated the establishment of chairs for instruction in mental disease, and was, with Verga, chiefly concerned in the formation of the Società Freniatrica and in promoting the first Italian journals devoted to psychiatry. As a medico-legal expert his opinion was always very highly valued, and his reports are regarded as models of sobriety and good sense combined with wide scientific knowledge. He was much interested in criminological and penal questions, and one of his longest studies is a history of the ancient prisons of Milan. He also published a study of tuberculosis, being among the first to recognise its infectious character, and another study of cretinism. His death occurred on the 27th of May.

In an address to the Società Freniatrica, Prof. Tamburini dwells on Biffi's amiable character. He was greatly loved by his patients, and took the warmest interest in them, an interest which by no means ceased when they were no longer under his care. He was ever ready to give help and advice, if necessary money also, to patients and students, in a quiet and unostentatious manner.

NOTICES BY THE REGISTRAR.

The following gentlemen were successful at the examination for the Certificate in Psychological Medicine, held on July 13th, 1899.

Examined at Bethlem Hospital, London: Richard Michael Ralph.

Examined at the Royal Asylum, Morningside, Edinburgh: J. Forsyth Falconer, A. J. Martin, and H. J. Maclean.

The following is a list of the questions which appeared on the paper:

1. Give a brief description of the mental symptoms of a case of epileptic insanity, and their relation in point of time to the fits. 2. What are the forms of climacteric insanity? Detail the symptoms of each. 3. Mention the physical and mental symptoms most common in puerperal insanity. 4. State fully how you would treat a case of acute delirious mania. 5. What is meant by melancholia attonita? Mention the different points between it and acute primary dementia. 6. Give a short description of the symptoms, course, prognosis, and treatment of acute alcoholic insanity. 7. What hypnotics are most in use in the treatment of insanity? Mention the dose of each, and in what class of cases it is most serviceable. 8. Mention the points to be attended to in filling up a medical certificate of insanity for a patient's admission to an asylum.

The Bronze Medal has been awarded to F. G. Crookshank, M.D.Lond., Assistant Medical Officer, Northampton County Asylum.

Examination for the Certificate in Psychological Medicine.

The next examination will be held in December, 1899. Due notice of the date will appear in the medical papers.

Examination for the Nursing Certificate.

The next examination for the Certificate of Proficiency in Nursing will be held on Monday, November 6th, 1899, and candidates are earnestly requested to send in their schedules, duly filled up, to the Registrar of the Association not later than Monday, October 2nd, as that will be the last day upon which, under the rules, applications for the examination can be received.

For further particulars respecting the various examinations of the Association, apply to the Registrar, Dr. Benham, City Asylum, Fishponds, Bristol.

NOTICES OF MEETINGS.

Medico-Psychological Association.

General Meeting.—The next General Meeting will be held in London on 9th November. The meeting will consider the question of Phthisis in Asylums.

South-Western Division.—The Autumn Meeting will be held at Digby's Asylum, near Exeter, on Tuesday, October 17th, 1899.

Scottish Division.—The Autumn Meeting will be held in Edinburgh on the third Thursday (16th) of November, to avoid the date of the General Meeting.

Irish Division.—The next Meeting will be held early in April, 1900, at the College of Physicians, Dublin.

International Medical Congress of 1900.

We have received notice of the Thirteenth International Medical Congress, which is to be held in Paris, 2nd till 9th August of next year. Reference may be made to the *Lancet* of 8th July last for full particulars, or to the General Secretary, Dr. Chauffard, 21, Rue St. Guillaume, Paris, for full particulars.

The Eleventh Section is devoted to Mental Diseases and Psychology. Dr. Magnum is the President and Dr. Ant. Ritti, at l'Asile de Charenton, Seine, is the Secretary. The first report, by Ziehen of Jena, Murri of Turin, and J. Voisin of Paris, will deal with the Psychosis of Puberty. G. E. Shuttleworth and Fletcher Beach of London, Mierzejewski of St. Petersburg, and Bournville of Paris, will report on the Pathological Anatomy of Idiocy. Clemens Neisser of Leubus, Korsakof of Moscow, and Morel of Mons will report on Rest in Bed for the Treatment of Acute Forms of Insanity, and the modifications this would entail in the organisation of asylums for the insane. Krafft-Ebing of Vienna, Morselli of Genoa, and Paul Garnier of Paris, report on Impulses due to Sexual Perversion from the Medico-legal Point of View.

International Congress of Psychology.

The Fourth Congress will be held in Paris, 20th till 25th August, 1900. The General Secretary is Dr. Pierre Janet, 21, Rue Barbet-de-Jouy, Paris, to whom inquiries may be addressed.

APPOINTMENTS.

Francis O. Simpson, L.R.C.P.Lond., M.R.C.S.Eng., appointed Senior Assistant Medical Office to the County Asylum, Rainhill, near Liverpool.

W. St. John Skeen, M.B., C.M., appointed Medical Superintendent to the Durham County Asylum, *vice* Robert Smith, M.D., resigned.

ERRATA.

Page 627. West Riding Asylum, Wadsley, *for* Charles Edward Jackman *read* Charles *Edwin* Jackman. County Asylum, Aylesbury, Bucks, *for* Mary Jeffery *read* Mary *Jeffrey*.

,, 628. County Asylum, Abergavenny, Monmouth, *for* Carrie Davies *read* *Cassie* Davies. County Asylum, Bridgend, Glamorgan, *for* Charlotte Elizabeth Evans *read Elizabeth Charlotte* Evans. County Asylum, Haywards Heath, Sussex, *for* Harry Lloyd Wiggleworth *read* Harry Lloyd *Wigglesworth; for* Mary Derbyshire *read* Mary *Darbyshire.*

,, 629. London County Asylum, Claybury, Essex, *for* Emily Syton Jones *read* Emily *Eyton* Jones. County Asylum, Exminster, Devon, *for* Francis Annie Fisher *read Frances* Annie Fisher. London County Asylum, Banstead, Surrey, *for* Charles Fox *read* Charles *Day.* City Asylum, Bristol, *for* John O'Neill *read* John *O'Neil.*

,, 630. Broadmoor Asylum, Wokingham, Berks, *for* Jane Ann Matthieson *read* Jane Ann *Mathieson.* Royal Asylum, Edinburgh, *for* Grace G. Keith *read* Grace G. *Reith.*

,, 631. Royal Asylum, Aberdeen, *for* Iamentina Lindsay *read Jamentina* Lindsay. Fife District Asylum, Cupar, *for* Christina Balcanguall *read* Christina *Balcanquall.* Richmond Asylum, Dublin, *for* Andrew M'Mullen *read* Andrew *McMullen.*

,, 630. *Omitted* Borough Asylum, Plymouth.—Females: Bessie Maud Mitchell, Rita Trevethan.



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